FIG. 1. SIDE VIEW OF THE FRAMEWORK OF AN ARAN ISLANDS CURRAGH

By courtesy of Mr T. H. Mason

FIG. 2. DETAILS OF THE FRAMEWORK AT THE FORE END OF A DINGLE CURRAGH

Photo by J. Hornell, 1936

BRITISH CORACLES AND IRISH CURRAGHS

with a NOTE *on the* QUFFAH *of* IRAQ

BY

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WITH AN INTRODUCTION BY

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23 plates and 23 figures and plans in the text

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INTRODUCTION

It is somewhat strange that, until Mr Hornell devoted his attention to the subject, no one had published any connected account of the fascinating and historically significant career of the wickerwork craft which, centuries before the Romans visited these islands, had an important share in the trade of Ancient Britain and deservedly received a memorial niche in the *Commentaries* of Julius Caesar. In the present volume their story, as gathered from the myths, the legends and the annals of Wales and Ireland, is set forth in a manner as detailed as the extant fragments of recorded fact make possible: while of their present-day descendants, or modern counterparts, Mr Hornell furnishes the first detailed description and the first reliable plans.

On the rivers of Wales the salmon-fishing coracle has certainly been "an unconscionable time in dying": but to-day its life is certainly at the ebb, for as the reins of fishery control are drawn tighter, those who have prolonged the existence of the coracle are accused of levying undue toll on the ascending fish, and are regarded with undisguised disfavour. Before many years are past, these men, fishing in pairs, will no longer be observed, dropping silently down stream, with their deadly net efficiently extended between their antiquated wicker boats. In Ireland the tragedy of the river coracle also draws swiftly to its close: for on one single Irish river alone a few forlorn coracle-fishermen continue their trade in boats of a fashion everywhere else defunct.

It is otherwise with the sea-going craft on the West Coast of Ireland. Here the light, canvas-covered curragh is, for the time at least, holding its own as a cheap, serviceable and withal weatherly vessel, admirably suited to the needs of inshore fishermen who for the most part lack the means to buy the comparatively expensive plank-built motor-boats used increasingly in more prosperous localities.

Curraghs differ widely in the details of their construction. The West Irish fisherfolk live such isolated lives in their little creeks and inlets, that local designs have been evolved to satisfy local requirements, and these vary with the physical characteristics of the fisherman's environment. To obtain his

knowledge of these local peculiarities, to measure and to take off the lines of the different types of vessel, Mr Hornell devoted two whole summers. During this pious pilgrimage he visited all the important fishery centres, from Donegal in the north to Kerry in the south, as well as many of the tiny clusters of thatched cabins which harmonize so picturesquely with the wild beauty of the coves that, here and there, mark a break in the grandeur of this rugged and forbidding coast-line. The result of these labours has been to preserve for all time a clear record of the fishing curraghs of Ireland as they exist to-day; for here, as elsewhere, these simple craft which bridge the gulf between ancient and modern times and, like other products of primitive man, often delight the eye with the elegance and beauty of their lines, are gradually giving way before the mechanical spirit of the age, personified by the internal combustion engine. Moreover, apart from the mobility conferred by the motor-boat and the greater range of fishing grounds made possible by its use, the change over is being accelerated by the general indisposition of the younger generation, here as elsewhere in Britain, to endure the discomforts and undergo the hardships which were cheerfully accepted by our ancestors.

So the old order changes, giving place to new. But before mechanization levies its inevitable toll, "leaving no trace" behind, the Society for Nautical Research has been doing what is possible to put on record reliable details of old types of minor seacraft, now doomed to extinction. Mr Hornell's work forms part of a scheme for the survey of the whole of the coastal and river craft of Great Britain and Ireland, whereby detailed plans of each type of vessel shall be collected before it is too late. This scheme, barely four years old, owes its genesis to a lecture on "Surviving Types of Coastal Craft of the British Isles" delivered by Mr Frank G. G. Carr at Salters' Hall in February 1934. Consequent upon this lecture a Sub-committee was formed, with Mr Hornell as Chairman and Mr Carr as Honorary Secretary, to devise ways and means to effect the purpose in view. One result of the Sub-committee's efforts was the collection of a sum of just over £350; of which £200 was generously contributed by the Pilgrim Trustees, to mark

their appreciation of the importance of the project. By means of this modest subsidy all extant types of the coastal craft of Great Britain, together with the Isle of Man and the Scilly Islands, have been thoroughly surveyed and over one hundred and sixty detailed plans prepared and deposited for reference in the National Maritime Museum. Photographic negatives have been deposited at the Science Museum, South Kensington, where prints may be obtained by the general public at a nominal charge.

Unfortunately the funds collected in 1934 are now exhausted; and the surviving types of Irish fishing craft, apart from the curraghs, have still to receive attention. In this connexion I should like to stress the fact that the investigation of curraghs has cost the Society nothing, for Mr Hornell conducted this important enquiry entirely at his own expense. Further he has very generously waived any claim to royalties on the present volume, which is a reprint of a series of articles which have appeared in *The Mariner's Mirror*, the Quarterly Journal of the Society for Nautical Research. By this disinterested action on his part, any profit that may accrue from sales of this book is earmarked towards the cost of carrying through the programme of work which still remains to be done in Ireland. It is estimated that a sum of £150 would suffice for this purpose; and it is to be hoped that subscriptions may be received from yachtsmen and others in Ireland who recognize the importance of preserving adequate records of the many interesting types of craft still surviving in their country. The call is urgent; the need for immediate action undeniable: and in commending this present volume to the favourable consideration of all lovers of shipping and craft, I should like to express the hope that the pioneer work conducted by Mr Hornell may attract the necessary reinforcement of work and money for that final effort to reach the goal, which to men of our Island Race always proved in times past, by itself, sufficient incentive.

GEOFFREY CALLENDER

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IMPORTANT NOTICE

The pagination, plate and figure numbers in this book accord with those of the articles as originally published in *The Mariner's Mirror*, the Quarterly Journal of the Society for Nautical Research, and, therefore, are not consecutive. Hence quotations and references should always include *the number of the Section* as well as that of the page or plate as in the following example, where reference is made to the two kinds of curraghs in Tory Island:

"J. Hornell, *British Coracles and Irish Curraghs*, Section 4, p. 166, and Pl. IV, fig. 1. London, 1938."

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BRITISH CORACLES

By James Hornell

UNTIL now no connected account of those primitive British river craft known in English as coracles has ever appeared. Their story is altogether attractive; the fascination and charm of the unusual and bizarre are combined with the merit of practical utility and the interest of an ancestry that leads directly back to days long prior to the use of skin-covered boats by our warlike forefathers in their stout and by no means ineffective resistance to the onslaughts of Caesar's disciplined legions during his raiding incursions into this country.

To-day the use of coracles in the British Isles is confined to the rivers of Wales and the Welsh Marches—to the Teifi, the Towy, the Taf, the Cleddau, the Severn and the Dee. From the Usk, the Wye and the Monnow, they have disappeared within the memory of middle-aged residents. In Ireland they were to be found on the Boyne till recently; on the Scottish mainland the last survivors danced on the turbulent bosom of the Spey, but that is a memory of many years ago.

The British coracle is commonly linked with the Irish sea-going curragh (Erse, *curach*) as varieties of a single type. This is incorrect. A relationship exists, but the British coracle is by far the older form, being derived from the same common source as the bitumen-coated *guffa* of Iraq and the skin-covered coracles of India and Tibet. The Irish curragh, on the other hand, is possibly of local or indigenous origin, evolved in Celtic Britain from a mixed ancestry. Its form is modelled upon that of ancient plank-built boats, but it was the short, rounded, river coracle which inspired its builders to substitute light and easily worked hide in place of wood as a covering for the framework. The boat-shaped curragh is confined at the present day to the wild western coast of Ireland; on the evidence of Roman authors it appears to have been in common use on the south coast of England in the years immediately before and after the beginning of the Christian era.

To collect the materials used in the following pages I have visited every river in Britain whereon coracles are still to be

found. During the investigation I made many friends; it is no exaggeration to say that everyone whom I interviewed gave freely and generously of the knowledge he possessed. Limitations of space preclude the mention of every individual name, but I cannot omit to record my grateful thanks to the following who have been particularly helpful: Mr A. Stanley Davies, Hon. Curator, Powysland Museum; Mr George Eyre Evans, Hon. Secretary, Carmarthenshire Antiquarian Society; Mr Arthur ap Gwynn, University College of Wales, Aberystwyth; Mr George M. King, Superintendent, Dee Fishery Board; Sir John Edward Lloyd, Bangor; Captain J. Hughes-Parry and Mr E. S. Lloyd-Jones, of Llangollen; Mr L. Hugh Milne, Inspector of Fisheries, South Wales; the Rev. J. Dyfnallt Owen, Carmarthen; Mr R. Pashley, Ross; Mr W. M. Rees, Usk, and Dr Ifor Williams. Especially do I thank Mr Iorwerth C. Peate, of the National Museum of Wales, Cardiff, for many valuable suggestions and for placing his intimate knowledge of Welsh literature and material culture at my disposal. Finally, I am indebted to Miss M. Wight, Mordiford, Mrs J. F. Parker, Bewdley, and Mr G. W. Pike, Narberth, for important information and the use of photographs. The coracle men, one and all, took a lively interest in my work and their names will be mentioned in due course.

HISTORICAL

We owe the earliest definite record of British skin-covered craft to Julius Cæsar. Warring in Spain in 49 B.C. against another Roman army fighting in the interest of Pompey, Cæsar's forces, when cantoned in the neighbourhood of Lerida, had their lines of communication cut on one occasion by the breaking down by floods of two bridges built across the river Sicoris (Segre). This dangerous position was retrieved by the genius of the general, who, in his own account of the operations, writes:

> When Cæsar's affairs were in this unfavourable position, and all the passes guarded by the soldiers and horse of Afranius, and the bridges could not be repaired, Cæsar ordered his soldiers to make boats of the kind that his knowledge of Britain a few years before [in 55–54 B.C.] had taught him. First, the keels and ribs were made of light timber, then the rest of the hull of the boats was wrought with wickerwork, and covered over with hides.[1] When these were finished, he drew them down to the river in waggons, and transported in them some soldiers across the river, and on a sudden took possession of a hill adjoining the bank. This he fortified at once and finished it in two days.

Critical examination of this passage shows that, contrary to the general belief, these vessels could not have been river coracles. Cæsar refers specifically to the presence of a keel and of ribs made of light timbers. Now no coracle has a keel, neither would waggon transport have been necessary—each soldier would have carried his coracle on his back. Other decisive evidence that these were not coracles but curraghs is the certainty that no adequate body of troops could be ferried across a river in flood by men untrained in the management of coracles. On the other hand, men with but slight knowledge of rowing could pull the heavy oars used in wood-framed curraghs of ordinary boat shape. The employment of waggon transport implies, moreover, that Cæsar's vessels were large enough to carry a number of soldiers as passengers, and so effect a landing in sufficient force on the hostile bank of the river.

From the wording of the account it is clear that Cæsar had encountered skin-covered vessels during his raids into south-west England; it is also to be inferred that this type of craft was confined, so far as Cæsar was aware, to the British coasts.

This does not, however, rule out the possible existence of related craft elsewhere in Europe at this period, for we find that Lucan, a century later, when describing the same incident in Spain, says:

> When the Sicoris regains its banks and leaves the plain, in the first place, the white willow, its twigs in water, is woven into small boats, and covered over, the bullock being slaughtered; adapted for passengers it floats along the swelling stream. Thus does the Venetian on the flowing Padus [Po], and on the expanded ocean the Briton sail.[2]

Pliny is the next writer to mention hide-covered boats. In his *Naturalis Historia*, written during the first century A.D.,[3]

1 *De Bello Civile*, Book I, chap. IV. The Latin description of construction is: "Carinae primum ac statumina ex levi materia fiebant; reliquum corpus navium viminibus contextum, coriis integebatur."

2 *The Pharsalia of Lucan*, translation by H. T. Riley, Book IV, London, 1853. Marcus Annaeus Lucanus lived A.D. 39–65.

3 Pliny lost his life in the great eruption of Vesuvius, A.D. 79.

he makes several references to their use in Britain. In Book IV, chap. 30 (16), he relates that "Timaeus the historian[1] says that an island called Mictis [?Vectis][2] is within six days' sail of Britannia, in which white lead [tin] is found, and that the Britons sail over to it in boats of osier, covered with sewed hides". Again, in Book VII, chap. 57, he states definitely, "At the present day they [boats] are made in the British Ocean, of wicker-work covered with hides".[3]

More definite localisation of the range of hide-covered craft is afforded by Caius Julius Solinus in his *Collectanea Rerum Memorabilium*, commonly known by its second title of *Polyhistor*, written in the third century. In Book XXIII, entitled "Britannia", he says:

> The sea which separates Hibernia from Britain is rough and stormy throughout the year; it is navigable for a few days only; they voyage in small boats formed of pliant twigs, covered with the skins of oxen. During the time they are at sea, the voyagers abstain from food.[4]

Various other Roman writers and especially Avienus (fourth century) and Sidonius Apollinaris (fifth century) make reference to skin-covered vessels possessed by the Britons, apparently of the sea-going curragh type. Verses by Rufus Festus Avienus are particularly valuable. Referring to the people of the Oestrymnides, under which term we have to include Cornwall and perhaps part of Devon, he describes them as

> Lying far off and rich in metals
> Of tin and lead. Great the strength of this nation,
> Proud their mind, powerful their skill,
> Trading the constant care of all.
> .....

1 Timaeus died about 256 B.C.

2 Vectis was the Roman name for the Isle of Wight; six days may well have been the time taken by hide-covered boats (curraghs) on the voyage from the Cornish mines to the place where merchants from Gaul took delivery of their cargoes of tin.

3 *The Natural History of Pliny*, translation by Bostock and Riley (Bohn's Classical Library). London, 1855–7.

4 "Mare quod Hiberniam et Britanniam interluit, undosum inquietumque toto in anno, nonnisi pauculis diebus est navigabile. Navigant autem vimineis alveis, quos circumdant ambitione tergorum bubulorum: quantocumque tempore cursus tenebit, navigantes escis abstinent."

> They know not to fit with pine
> Their keels, nor with fir, as use is,
> They shape their boats; but strange to say,
> They fit their vessels with united skins,
> And often traverse the deep in a hide.[1]

Vessels of the type described, employed in coastal fishing and transport, would certainly be better known to foreign travellers and writers than the small coracles used by the natives on rivers in localities often wild and difficult of access, buried for the most part in the depths of the dense forests that covered so much of the land at that period.

When increasing intercourse with skilled Roman artificers, combined with the rise of a thriving iron industry in Sussex and elsewhere, caused the use of iron tools to become general, the employment of planking quickly ousted that of hide as the covering of a sea-going boat's framework, in all parts of the British Isles except in those localities where local considerations —remoteness, conservative prejudice, poverty and lack of suitable timber—dictated adherence to the more primitive method. Thus it happened that when the Brythons of England and Wales abandoned the use of the sea-going curragh during or soon after the Roman occupation, the Irish and the western Celts of Scotland continued to employ them extensively. To-day they still flourish among the fisherfolk of western Ireland; by long practice these people have acquired amazing dexterity in the handling of their curraghs and even consider them to be safer craft in which to wrest their living from the tempestuous Atlantic than those built of planks. That their cost is not one-tenth of that of planked boats is probably the main reason of their survival, for these people find life a hard and difficult struggle.

Whereas Irish and Scots literature teems with stories and legends of long voyages made in curraghs, such for example as those made by the missionary monks of the Culdee Church—St Columba, St Brendan, St Cormac and others—the only ancient British and Saxon references consist of one by Gildas who, in the sixth century, describes hordes of Scots and Picts as landing from curraghs (*de curucis*) and another to a voyage made by three

1 Translation as given by W. F. Skene, *Celtic Scotland*, I, 168.

Irish "Scots" who landed on the coast of Cornwall from a hide-covered boat in A.D. 891, seven days out from Ireland.[1]

From this date onwards we find nothing on record suggesting any survival in England proper of either curragh or coracle until the time of Edward III, when Froissart in his *Chronicles*, under date 1360, states that in the army which invaded France in this year the English noblemen and wealthy people took over more than 6000 carts for the transport of tents and all possible requirements needed to ensure comfort.

Upon these carts were also carried many vessels and small boats (*nacelles et batelets*) made very artfully of boiled leather (*cuir bouilli*).[2] They were large enough to carry three men and were employed for rowing and fishing on lakes and ponds however large they might be.

More extended use of the same type of craft was intended by Henry V, for we read in Holinshed[3] that among the preparations made for his first expedition into France, A.D. 1414, was the provision of "boates to passe over rivers covered with leather".

The boats mentioned by these historians appear to have been large coracles rather than curraghs, although Froissart's craft are said to have carried three men. In Holinshed's *Chronicle* no subsequent mention is made of skin-covered boats, but much is said about the difficulty and danger experienced by the army when crossing rivers by fords. Hence it is probable that the "skin-boats" were coracles used only for reconnoitring and for carrying messengers and despatches. That they were paddled by Welshmen is extremely likely, for Welsh troops—lightly equipped footmen—are mentioned as inflicting great execution in the French ranks by their skill as archers and by their ham-stringing exploits when mingling among the enemy's cavalry.

With regard to Wales we find equally few references. The oldest is a clear description which we owe to the painstaking record of a journey made through Wales in 1188 by Giraldus

1 *The Anglo-Saxon Chronicle*, edited by J. A. Giles, 5th ed. 1880, p. 360.

2 *Cuir bouilli* was a recognised military term for a preparation of leather suitable for making accessory parts of a suit of armour. It was leather softened by boiling in oil; when dry it was very tough and retained the shape of any object on which it had been moulded when soft.

3 *The Last Volume of the Chronicles of England, Scotlande and Irelande*, London, 1577, p. 1171.

Cambrensis (Gerald de Barri), an ecclesiastic of Norman descent. In his "Description of Wales"[1] he says:

The boats which they employ in fishing or in crossing the rivers are made of twigs, not oblong, nor pointed, but almost round or rather triangular, covered both within and without with raw hides: when a salmon thrown into one of these boats strikes it hard with its tail, he often oversets it, and endangers both the vessel and its navigator. The fishermen, according to the custom of the country, in going to and from the rivers, carry these boats on their shoulders; on which occasion that famous dealer in fables, Bledheric, who lived a little before our time, thus mysteriously said: "There is amongst us a people, who when they go out in search of prey, carry their horses on their backs to the place of plunder; in order to catch their prey, they leap upon their horses, and when it is taken, carry their horses home again upon their shoulders."

Probably Bledheric used the expression "carry their horses on their backs" merely as a figurative and fanciful phrase to describe the peculiar way that coracles were carried. Girardus need not have been so scornful! He himself committed a mistake in saying that coracles were covered "both within and without with raw hides"; and he certainly exaggerates when he gives a salmon credit for being able to overset a coracle with a blow of its tail!

Early allusions to coracles in Welsh literature occur in the *Mabinogion*, a collection of Welsh romances written down before the thirteenth century, but dating back to a much earlier age. The first is an order: "Now do thou stop the ships and curraghs, so that no one may go to Wales."[2]

On another page, in the story of the rebirth of Gwion Bach as Taliesin the Bard, it is said that when the babe was born, his mother, though desirous of suppressing him, had not the heart to kill him on account of his great beauty; so "she wrapped him in a leathern bag and cast him into the sea, to the mercy of God, on the 29th day of April". The "bag", which from other evidence was certainly a leather-covered coracle, was eventually stranded on the stakes of a fishing weir, between Dovey and Aberystwyth.[3] The analogy of this story to that of Moses in the bulrushes suggests the source of this part of the Welsh story.

1 *The Itinerary of Archbishop Baldwin through Wales*, A.D. MCLXXXVIII, translated by Sir R. Colt Hoare, 2 vols., 1806, II, 332–3.

2 "*Par weithon wahard y llongeu, a'r ysgraffeu, a'r corygeu, ual nat el neb y Gymry.*"

3 *The Mabinogion*, translation by Lady C. Guest, 1877, ed. pp. 472–3.

Probably the earliest allusion to fishing from a coracle is found in the Gododdin poem (5th or 6th century), where one line reads: "He would kill a fish in his coracle."[1]

Later in date are the mediæval *cywyddau*, lyrical poems containing a wealth of detail for the student of the material culture of the Wales of that period. These poems are still entombed in manuscript—mines of information as yet inadequately explored. Mr Iorwerth C. Peate, M.A., F.S.A., of the National Museum of Wales, in a letter received September 7th, 1935, kindly supplies extracts from two of the poems which make reference to coracles. He writes:

In Cardiff MS. 64, which is the only one I have yet examined, there are three poems (*cywyddau*) dealing with the coracle. The MS. was written in 1736–7, but the same poems appear also in British Museum MSS. 29, 31, 52; Cardiff MSS. 7, 12; Jesus College MS. 12; Peniarth MSS. 99, 101, 152; and Mostyn MSS. 147 and 148. I have not had an opportunity of comparing these versions, but Dr Gwenogfryn Evans (*Report on Welsh Manuscripts*) states that the earliest version of the poems was written in 1564.

The first poem is one by Ifan Fychan ab Ifan ab Adda soliciting a coracle from Siôn Eutun. The second is a reply by Maredudd ap Rhys on behalf of Siôn Eutun, refusing the request, and the third is a reply to the refusal by Ifan Fychan ab Ifan ab Adda.

Maredudd ap Rhys flourished between 1430 and 1450[2] and is described in the manuscripts (*e.g.* Llanstephan MS. 11 and Peniarth MS. 240) as "of Maelor" and "of Ruabon". He is said to have been a priest at Ruabon, and his work shows that he lived on the banks of the river Alun.[2] Two well-known poems of his were written to ask and to thank for a fishing-net. He was a poet of distinction.

Cywydd A (by Ifan Fychan ab Ifan ab Adda)

He writes:	Translation:
Am gwrwgl i ymguriaw Am y pysg drud cyn y Pasg draw. Crair lleder, croyw air Lladin Codrwym du, caeadrwym din... Cod groenddu da, ceidw grinddellt... Y gerwyn deg o groen du, Bwcled sad, ble cela' son, Bas ydyw o bais eidion... Padell ar ddŵr ni'm pydra O groen cu eidion du da.	For a coracle to seek for the valuable fish before next Easter. A leather relic, a distinct Latin word, with black covering enclosing its bottom. ...A cover of black skin which protects the dry laths....A fair vat of black skin, a firm buckler (why should I conceal it), shallow, made of a bullock's tunic....A pan which will not [cause] me rot on the water, made from the fair skin of a good black bullock.

1 Skene, W. F., *Four Ancient Books of Wales*, II, 90, translated in vol. I, p. 406.
2 W. J. Gruffydd, *Llenyddiaeth Cymru*, 1450–1600, pp. 9–11.

Cywydd B (by Maredudd ap Rhys)

Y tlws lle caed Taliesin, Bola croen ar waith bual crwn. Blwch byrflew tondew tindwn... Nofiwr o groen anifail Noc serchog foliog o fail... Llestr rhwth fal crwth fola croen... Coflaid o ledryn cyflo... Myn Pedr, mae yn y lledryn Rywiogaeth wyll a dwyll dyn. A elai'r cwrwgl dulwyd I'r llyn â'r pysgotwr llwyd? Er dim ni ddeuai o'r dŵr Heb ysgŵd i'w bysgodwr!... O'ch Fair, pam na chai efo Long o groen newydd flingo?... Groen buwch ar waith gweren bert.	The "jewel" in which Taliesin was found. A skin bag in the shape of a circular horn. A short-haired, thick-skinned box with broken bottom [*i.e.* criss-crossing of the laths]....A swimmer of animal's skin, a fond paunchy vessel....An open vessel like a skin-bagged *crwth*...an armful of leather in-calf....By Peter, there is in the leather vessel the nature of a fiend which deceives man. Would the dark grey coracle take the fisherman to the pool? Never would it come home from the water without a toss for its fisherman!...By Mary, why does he not have a ship of newly flayed skin? The skin of a cow worked with the fair tallow-cake.

Cywydd B is sarcastic at Ifan Fychan's expense. There is no important material in Cywydd C. I intend publishing the *cywydd* material dealing with coracles, etc., in the near future.

Several interesting points are brought out in these extracts. Among them is the preference apparently shown for a skin from a black bullock. This suggests kinship with the superstition favouring black as the lucky colour among cats. Another is the recognition that Taliesin was set adrift as a babe in a small coracle—the leather bag of the *Mabinogion*. Lastly, the reference to the hide as worked with tallow-cake implies that tallow was used to render the hide impervious to water and to preserve it from the effects of repeated wettings. In St Brendan's time, butter was employed for a similar purpose.

PART I. THE CORACLES OF WALES AND THE MARCHES

Wales and the English counties traversed by the Severn, the Usk and the Wye, are the only localities in Britain where the use of coracles survived until about the end of last century. At the present day their range has become greatly circumscribed and their numbers largely reduced. Except in one locality on the Severn they are employed almost exclusively for salmon fishing. Indeed, had it not been that the rivers of this region

are noted spawning resorts of this fish, the British coracle would have followed the British curragh into oblivion centuries ago.

Fortunately the coracle is the most suitable form of craft known to man, whether he be net fisherman or angler, for fishing on shallow, rock-strewn rivers. It is light, weighing from 18 to 40 lb. when of one-man size, quickly and cheaply made, and it floats in from 2 to 3 in. of water. Hence, even when the eagerness of riparian owners, whether keen disciples of Isaac Walton, or men who see a profitable source of income in the leasing of angling rights, has resulted in the banning of coracle netting, the angler finds the coracle far more useful than "waders" when pitting his skill against the wariness and strength of a salmon. A keen angler assures me that if a coracle be used, the catch made from it may be put at quite double that of an equally skilful man fishing in waders from the shore.

Evidence of the antiquity of the use of coracles in Wales is seen in the diversity of constructional detail characterising the coracles of different rivers. To some extent this is due to differences in the physical features of the streams; some are notably swift and turbulent, others are slow-flowing and placid under ordinary conditions; some are deep and others are shallow and impeded by rapids. Tradition plays its part also; as father made his coracle, so son learns and adopts the same design, with the result that the local type becomes fixed. Outside contacts and the spread of education have had increasing influence in these latter days, causing minor revolutions in methods and materials on some rivers, notably the Dee. Apart from the use of waterproofed cloth in place of hide, the principal of these are (*a*) the substitution of sawn and often planed laths in the framework for branches of ash or willow, split with a trower and trimmed with a knife; (*b*) the employment of sawn laths for building up the gunwale (Severn) in place of plaited hazel or willow withies (south-west Wales); (*c*) last and most notable of all, the replacement of a wooden frame by one made entirely of aluminium strips, rivetted together (Dee).

Typically the old design of a coracle as it exists to-day consists of a broad, ovate, latticed framework in the form of a shallow, wide-mouthed basket, covered with calico waterproofed outside with a coating of pitch and tar. This skeleton frame is made usually of seven laths arranged in a fore-and-aft direction—the longitudinal frames, interwoven with a varying number worked in at right angles—the transverse frames. Around the bent-up ends of these two sets of frames, three rows of withies are plaited or woven to keep the laths in place and to form a strengthening gunwale. We shall note later, when dealing with the different rivers, the various modifications which occur.

According to all ancient and mediæval writers from Cæsar (first century B.C.) to Camden (A.D. 1586), the original covering of the British coracle was hide, either of ox or horse, the covering area of one hide governing the size of a one-man coracle, say $4\frac{1}{2}$ by $3\frac{1}{2}$ ft. Hide as the covering was replaced at some indeterminate date by flannel, made watertight by tarring or pitching. Probably this took place soon after Camden's time, for Welsh flannel made from the short staple of the mountain sheep was already an important local industry in the sixteenth century. In south-west Wales flannel continued in use for this purpose until about 1870. Middle-aged informants both at Carmarthen and Cenarth stated to me that their fathers told them that before calico was used, "flannen" (*gwlanen*, a coarse home-made Welsh flannel) was employed. J. R. Phillips, who published a *History of Cilgerran* in 1867, confirms this, saying that flannel was used "until recently". The first notice of the use of flannel in this connection that I have been able to trace is contained in the following lines on an old print entitled "Llangunnor Hill", dated 1794, in the Museum of the Carmarthenshire Antiquarian Society:

> Upon the glittering stream behold
> Those fishermen, of courage bold,
> In num'rous pairs, pursue their trade
> In coracles, themselves have made;
> Formed of slight twigs with flannel cas'd
> O'er which three coats of tar are plac'd.
> And (as a porter bears his pack)
> Each mounts his vessel on his back.

Regarding the method of applying the waterproofing, Mr George M. King, in a letter dated July 31st, 1935, informs me that in 1914 Mr Tom Elias of Carmarthen, then aged over 70,

told him that when he was a boy "a sort of woollen blanket was used for the skin". This was dipped into a receptacle holding a very hot preparation of tar and rosin. When well saturated, four men seized it, one at each corner, and plopped it down over the coracle frame laid bottom up on a rough trestle. And old Tom said: "It was a messy job getting the skin on tight, and well tucked and laced round the edge of the boat."

Whether the use of flannel was practised outside of the flannel-manufacturing district of Wales is uncertain, for we have definite evidence that at the end of the eighteenth century, when Carmarthen men were using this material for their coracles, the people of north Wales were employing canvas or calico. Thus the Rev. W. Bingley when describing how he saw two coracles on the river Dovey in the year 1798,[1] accompanies this with the remark that "They [coracles] are now usually covered with canvas" in place of hide as mentioned by Camden.

Similarly, T. Pennant in 1810 records[2] of the Dee district that "strong pitched canvas" has replaced the ancient custom of covering a coracle with a hide.

Here it is appropriate to note that while English-speaking fishermen at Carmarthen often call the tarred cover the "skin", those of Monmouth and Shrewsbury term it the "hide". Both are survival terms dating from the time when the cover was the skin or hide of horse or ox.

Presumably it was when coracles were hide-covered that the old Welsh adage took form which runs "A man's load is his coracle" (*Llwyth gŵr ei gwrwgl*). To-day a coracle in south Wales seldom weighs as much as 30 lb., surely a trivial load to carry. A hide-covered coracle would weigh nearly double this, and would justify the proverb more fittingly.

The life of a coracle is indefinite. With care it will last several years. Slight damage is repaired by applying a tarred patch over a hole or a rent, and when the entire covering is too worn to be patched any longer it is sometimes stripped off and a new one stretched over the frame. The Towy men usually burn their

1 *A Tour round North Wales performed during the Summer of* 1798, 2 vols. London, 1800, I, 470.

2 *Tours in Wales*, London, 1810, I, 303.

worn-out coracles, and this has given rise to the surmise that it is a relic of an ancient rite wherein the old coracles were sacrificed to the river gods. But as one man said to me: "a tarred coracle makes a fine bonfire"; and such was the fate on Armistice night of three old coracles saved up by a Carmarthen man to celebrate the end of the Great War.

Coracles are most numerous in south-west Wales, principally on the rivers Teifi and Towy; a few are also used on the Cleddau and the Taf. This region is the sole remaining locality where net fishing from coracles is now permitted. It survives under stringent regulation. A long close season is imposed, and in the open season no netting is permitted between 6 o'clock on Saturday morning until noon on the following Monday. No mesh smaller than 1½-in. bar is permitted. On the Towy an annual licence fee of £4. 4*s*. 0*d*. is charged for the use of each net, and the number of licences issued is subject to strict limitation, with the intention of a permanent reduction to twelve nets by 1936. On the Teifi the licence fee is £3. 5*s*. 0*d*. and on the Cleddau £1. Net fishing is not permitted on the Dee, Severn, Usk and Wye. On the Dee the prescriptive rights of the net fishermen were bought out in 1920 with money raised from the riparian owners.

The net used incorporates features that bespeak a very ancient origin and thereby deserves a short description. That used in south Wales consists of two sheets of netting; one of these, the armouring, is of large mesh, 92 meshes long by 4 deep, each mesh 5 in. along each side or "bar"; the other, the lint, 230 meshes across and 21½ meshes deep, varies in mesh size according to the season between 2, 1½ and 1¾-in. bar. The District Fishery Bye-laws prescribe 20 ft. as the maximum length of the net when mounted.

The two nets are joined together along top, bottom and ends. As the lint is much deeper than the armouring it billows out as a great shallow bag behind the armouring when the net is towed through the water. The foot-rope is leaded at short intervals. The net as a whole is suspended from a stout head-rope by loops of slighter rope, the stapling line, attached at intervals to sixteen horn rings threaded and running on the head-

rope. Six of the rings form the core of six annular cork floats placed alternately with five of the plain horn rings, spaced at intervals along the middle region of the net; the others are spaced similarly beyond these at each end. This stapling line at one end is made fast to a non-running horn ring lashed on to the head-rope; the other end is tied to the last of the running rings at the opposite end of the net. To the same ring is made fast one end of a long reeving rope, of which the other end is free.

In operation the net is towed downstream between two coracles. In one the man, whom we shall call No. 2, holds one end of the head-rope: the other end is held slackly in the hand of his partner (No. 1) in the other coracle; this man also holds the free end of the reeving rope. No. 1 is the senior or more skilled of the two men; when a fish strikes the net after passing through the large meshes of the armouring, No. 1 calls to the other man who instantly slacks away his end of the head-rope. No. 1 simultaneously drops the end of the reeving line and hauls in the head-rope with the utmost speed. As he does this the rings of the stapling slip along the head-rope, thereby causing the net to bunch up, imprisoning the fish. The two coracles come together, No. 1 extracts the fish, lifts it over the fore gunwale and despatches it with a blow of his club.

All ropes are made of cow or horse hair; success in fishing depends greatly upon the proper setting of the net, and this can be assured only if the rope material be liable neither to stretch nor to shrink. For the most important ropes cow's hair is preferred, as this is without the slight elasticity of horse hair (W. Lewis Thomas, Carmarthen). All ropes are made of dark brown or black hair except the head-rope, which is always of grey or white hair; when fishing at night it is essential to be able to distinguish it easily from the reeving rope, so one is made of black hair and the other of grey or white. Netting is mostly done at night, the men taking their sleep by day.[1]

When net fishing, one of the coracle men needs not to be an experienced fisherman; often he is a son or younger brother,

1 For a detailed technical description of a coracle net, see F. M. Davis, "An account of the fishing gear of England and Wales", *Fishery Investigations*, Series II, vol. V, No. 4, 1923. Ministry of Agriculture and Fisheries, London.

whose sole duty is to hold one end of the head-rope and paddle along in the position assigned to him. His older partner takes command and issues instructions as requisite. To be capsized in deep water in a swiftly running current is perilous even if the youth be able to swim. To prevent a fatality it is therefore the custom to tie one end of a rope round the waist of the learner, the other end being passed through a hole in the seat and made fast below by means of a large knot. A fair amount of slack is allowed. Should the coracle capsize the lad may disappear, but as the coracle will remain afloat though bottom up, the older man closes upon the coracle instantly; righting it, he seizes the lifeline and hauls the dripping lad alongside, thereafter paddling swiftly to the shore.

Coracle fishermen in south-west Wales have an age-old code of unwritten rules governing their operations, and these are seldom infringed. Under it the priority of beginning fishing is accorded to the pair of coracles that arrive first at the recognised starting point. The next pair refrain from beginning their "trawl" until the first pair have gone a certain distance down stream. Every fishing pool has its name, generally descriptive of some natural feature, such as Pil glas, the green or bluish creek; Gwar stafell, shallow chamber or cell; and Gwar Bach y Bont, the neck of the deep pool—names of some of the pools on the Towy river.[1]

Coracle Races have long been a popular form of public amusement. The earliest on record seems to be one that took place on the Severn on May 28th, 1798, near Llandrinio Bridge, for a silver cup valued five guineas. The names of three of the coracles entered were *Nancy the Rower*, the *Peggy* and the *Lucy*.[2] Another, the first in the district, was paddled on the Teifi about 1836;[3] a coracle race between Carmarthen men is usually a feature of the Mumbles Regatta.[4]

1 Jones, M. H., "Towy's Fishing Pools", *Trans. Carmarthen Antiq. Soc.* I, 34, 1905–6.

2 *Bye-gones, relating to Wales and the Border Counties*, 1876–7. Oswestry, Sept. 1876, p. 116.

3 *Idem*, Oct. 1876, p. 128.

4 *Gueret, Llewellyn and Merrett Review*, Jan. 1931, p. 27, where an illustration of a coracle race is given.

Nicknames. Coracle fishermen seldom address one another by surname or Christian name. Nicknames are universal. Among those collected while at Carmarthen are: Curly, Yankee, Boatman, Dai Griff, Dai Biggun (Long David?), Jack Biggun, Dai Shippo, Dai Fred, Llewellyn y Bont and Griff Pengelli.

At Monmouth I heard of Grecian, Bucket, Carron, Lomber, Novice and Teddy. It is quite usual for a name to descend from father to son. For example, the son of Teddy Morgan has succeeded to his father's name and he is known to all as Teddy Morgan, although his baptismal name is Alfred or Arthur. In the same way the man called Ned was baptised William, but that has long been forgotten.

Vocabulary of Welsh technical terms

The following terms are current among the coracle fishermen of the rivers Towy and Teifi. When recorded only from one river, this is indicated by a letter within brackets—(C) for the Towy, (T) for the Teifi.

Asen (pl. *eisau*)	A lath rib or frame.
Asen saithu	One of the two diagonal laths across the bottom.
Astell orlais	The partition at right angles to the seat, forming a receptacle for the catch.
Bachen (pl. *bachau*)	A short forked stake used to hold down the lath frame during construction, (C); diminutive of *bach*, a hook.
Bwrw	A fishing beat or reach on a river.
Carn	A horn ring on the head-rope of a net.
Carn-ffun	The stapling along the top of the net; it carries the horn rings and cork floats.
Cnocer	The club used to stun fish; from the English "knocker".
Corcyn	An annular cork net float.
Cwrwgl	A river coracle.
Cwt y cwrwgl	The "tail" or after end of a coracle.
Ffun (pl. *ffuniau*)	A cord or rope of a fishing net.
Ffiol	A bailer.
Gafael	The claw at the top of a Teifi paddle loom.
Gwiail plethu cwrwgl	"Plaited wattle of the coracle"; here the wattled gunwale (C); =*pleth mawr* (T).
Gwaelod	The bottom of the coracle; *gwaelod* ="bottom".
Gwden	A withy, hence applied on the Teifi to the twisted hazel rope used for carrying a coracle.
Gwragen	The protective ash hoop around the fore end of the gunwale, outside (C).
Llaw-ffun	Head-rope of a fishing net.

Plat rhwyf	Paddle blade (T).
Pleth fach	Withy plait around the after end of the bottom in a Teifi coracle.
Pleth mawr	The wattled gunwale (T); contrast *pleth fach*, the small plait on the bottom.
Plwm	"Lead" (cf. Latin *plumbum*); here it means a lead sinker on the foot-rope.
Plwm-ffun	The leaded foot-rope.
Plwm-ffun ucha	The 3-ply unit in the *plwm-ffun*; *ucha*, a common abbreviation of *uchaf*, upper.
Plwm-ffun isha	The 2-ply unit in the *plwm-ffun*; *isha*, a dialect form of *isa*, for *isaf*, lower.
Plwm yn bach cenol	The small lead marking the centre of the foot-rope; *cenol*, a dialect form of *canol*, middle.
Pwyllo'r ffuniau	"Arrange the net (ropes) on the gunwale."
Rhwyf	Paddle or oar.
Rhwyd fân	The small-meshed part of a net; the lint.
Rhwyd roth	The wide-meshed part of a net; the armouring. (Sir John Edward Lloyd considers that *roth* must be the feminine of *rhwth*, an adjective meaning "open".)
Sêt	The seat or thwart of a coracle.
Strapen cwrwgl	The carrying strap of a coracle (C).
Strapen ffiol	Strap holding the bailer in place (C).
Strapen cnocer	Strap holding the club in place (C).
Treill-ffun	The head-rope of a net.
Trwc	The whorl or reel for spinning cord.
Twll	"Hole", *i.e.* the drainage hole cut in the cover of a coracle at the tail end.

Fishermen generally avoid using the word "salmon" or "sewen" in conversation. A man meeting another on his way from the river with his coracle on his back, when asking if the fishing was good, will say "*Cwrddes di nhw heno?*" ("Did you meet *them* to-night?").

For philological notes on some of the terms given above, see Mr Kenneth Jackson's "Coracle fishing terms" in the *Bull. Board Celtic Studies*, VI, pt. 4, pp. 312–14, May, 1933.

The Welsh word for coracle has two distinct forms, (*a*) *corwc* or *corwg* and (*b*) *corwgl* or *cwrwgl*; these also occur under the mutational spellings *gwrwg* and *gwrwgl*. From the second form comes the English word "coracle". *Corwc* is the oldest form in which the term for coracle appears in Welsh, and it has been applied both to sea-going and to river craft covered with hide; it appears also as a term for a drinking vessel.

In the *Mabinogion*, when reference is made "to stop *corygeu*

[pl. of *corwc*] from going to Wales",[1] this applies clearly to hide-covered vessels going to Wales *by sea*. The word *corwc*, is clearly to be equated to *curach*, the Erse term for a boat-shaped vessel covered with hide (to-day replaced by canvas). Gildas and Adamnan Latinised *curach* into *curuca*.

The term *corwgl* in any one of its various spellings does not occur in the earliest Welsh literature so far as I am aware, but so little of this has survived that we cannot be certain when it came into use. It appears, however, to be a derivative from *corwg*, and as such it probably originated in the need to distinguish the one-man salmon-fishing type used on rivers from the larger sea-going vessel, to which belongs properly the term *corwc* or *corwg* (Welsh), *curach* (Erse) and curragh (English). The derivative does not seem to have been in use in Adamnan's time (seventh century) or at least was unknown to him; he does not include it in his list of the different kinds of boats then in use, although the "curuca de uno corio" was well known.

The sea-going *corwc* (*curach*) must have been of very great importance in the general life of Britain as well during the period of the Roman occupation as in that later one when the monks of the Culdee Church were sailing the seas in hide-covered craft, zealously intent upon the spreading of their faith. River coracles would be relatively of little importance until the time when the Celtic people of south Britain were, for the most part, cooped up in the mountain fastnesses of Wales by the advance of Saxon power by land and by Viking piracy at sea. Under these conditions Brythonic hide-covered ships (*corygeu*) disappeared from the narrow seas to be represented thence-forward by the tiny *corwgl* of the rivers used for ferrying and for fishing.

In the Latin *corium*, a hide, we have a word cognate with the Celtic *corwc*, a hide-covered vessel, but there is no direct relationship; both come from a common source much older than either language.

1 *Ut supra*, p. 7.

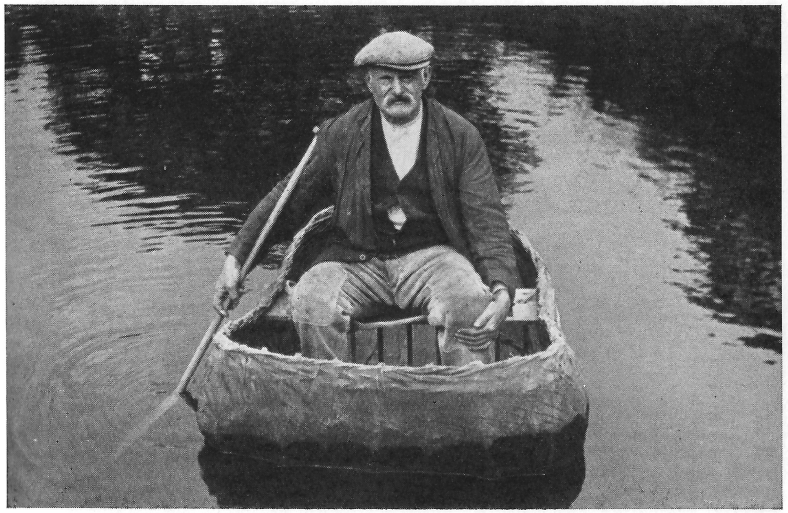


FIG. 1. A TEIFI FISHERMAN (DANIEL WILLIAMS) AFLOAT IN HIS CORACLE, CENARTH

The single-handed side stroke in use.

FIG. 2. A TOWY FISHERMAN (WILLIAM ELIAS) PADDLING TWO-HANDED OVER THE FORE END OF HIS CORACLE, CARMARTHEN

Photos by J. Hornell

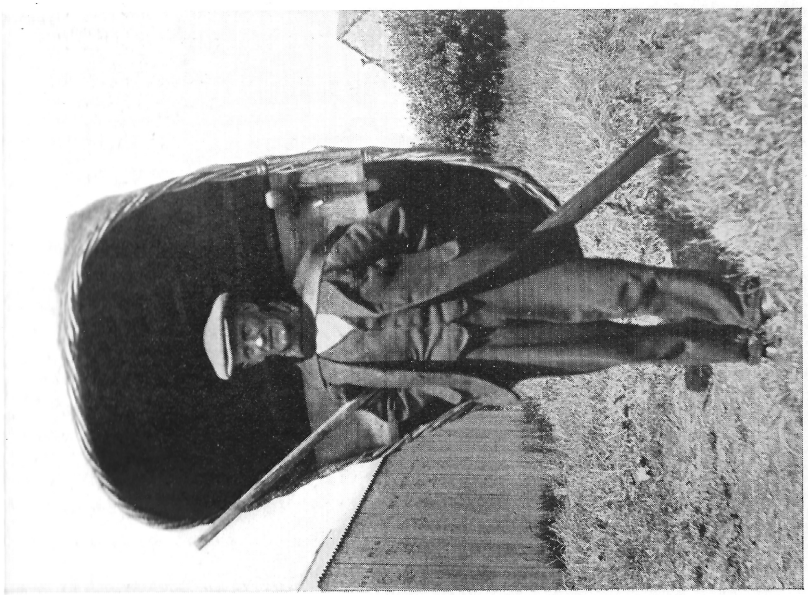


FIG. 2. THE TOWY MANNER OF CARRYING A CORACLE, CARMARTHEN

Note the "cnocer" in a loop on the seat and the leather carrying strap

Photos by J. Hornell

FIG. 1. THE TEIFI MANNER OF CARRYING A CORACLE, CENARTH

The claw of the paddle is hitched under the basal bar of the seat supports.

(1) THE TEIFI CORACLE

The greatest number of coracles in use on any river in Britain are to be found on the Teifi, the most picturesque river in south-west Wales, famous alike for the wild beauty of its foaming rapids and for its ancient and charming bridges. Thirty-three netting licences for coracle fishing were issued in 1935. As two coracles, each manned by one fisherman, are required to operate a net, the number of netting coracles and of coracle fishermen were not less than sixty-six. Occasionally a spare coracle is held in reserve; in addition several fly-fishers own coracles from which they angle on stretches of the river not open to the net men.

The chief centres of coracle netting on the Teifi are Cenarth, Cilgerran and Llechryd; all the coracles are of the same design. Daniel Williams and John Jones are Cenarth men noted for their skill in coracle building; the former figures in the photographs reproduced on Pl. I, fig. 1 and Pl. II, fig. 1.

The Teifi coracle is characteristically short and of squat, ungainly shape; in plan, broad and with very little horizontal curve at the fore end; nearly semicircular in plan at the after end. At the insertion of the seat, placed about mid-length, the gunwale is pinched in at each side, giving the appearance of a slight waist between the forward and after sections. At the fore end and along the sides to a point just behind the seat, the coracle shows a slight degree of tumble-home, whereby the bottom view appears broader than the face plan and has no midships constriction, its outline being bluntly triangular, with all the angles well rounded. The apex, more rounded than the other angles, represents the stern. The gunwale sheers slightly towards the fore end, more emphatically towards the after end. The bottom is flat except for the last 12–15 in., where it curves up gradually to the extremity of the stern. To anyone unfamiliar with these coracles, the narrowed and curved-up stern would seem to be the fore end, whereas the wide and deep forward end would certainly be considered as the stern.

The framework, over which a calico cover is eventually stretched, consists of seven longitudinal, U-shaped frames,

spaced from 4 to 5 in. apart, crossed and interwoven at right angles by an equal number of transverse frames, similarly spaced (see Pl. III, fig. 1). In order to give additional strength under the feet of the paddler, the three forward cross-frames are doubled. The central flat region of the two sets of frames forms a wide-meshed lattice-work floor, while the bent-up ends form ribs. Two diagonal laths, running lengthwise between opposite corners, are interwoven; they cross each other in front of the seat.

As only one transverse frame occurs abaft the seat, this part of the frame is strengthened by a semicircular plait of hazel withies; it is the position of this plait which determines the after limit of the flat region of the bottom.

A broad wooden plank, placed nearly amidships, forms the seat. The ends of two ribs pass through slots in each end of the seat, which is supported along the after-margin by a set of about nine wooden stanchions, the lower ends sunk in a basal bar fitted across the bottom.

A strong gunwale is formed by three bands of plaited withies, of which one plait passes over the ends of the seat.

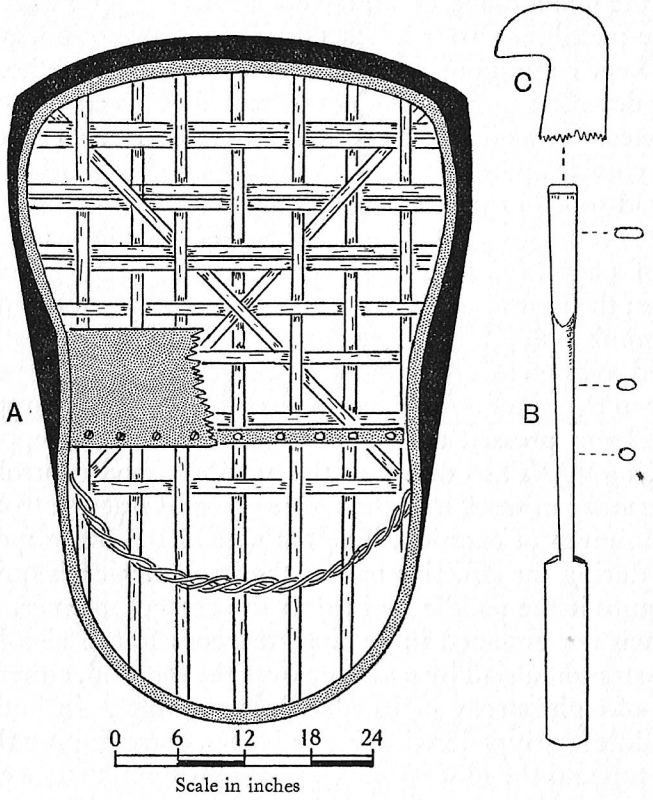
Covering the outside of this framework is a single sheet of stout unbleached calico, made watertight by the application of a mixture of pitch and tar.

To enable the coracle to be carried on the owner's back, each end of a length of twisted hazel bough is inserted in one of two pairs of holes made near each end of the seat. One end of the bough is passed down through the forward hole in a pair and brought up from under through the after-hole, thus locking it securely. The other end is treated similarly.

No bailer is carried as on the Towy; the men say that they find it unnecessary, as their river is non-tidal where they work and usually placid in the reaches fished.

The paddle used is 50 in. long, shaped out of ash. The blade, 16 in. long, is comparatively short; the sides are parallel, with distinct and rather abrupt shoulders. One side is flat, the other very slightly convex transversely. The loom is peculiar; of its total length of 34 in., its sectional form, at first nearly cylindrical, rapidly flattens, and at 24 in. from the shoulders begins

rapidly to assume a thin, blade-like shape, parallel-sided, and nearly 2 in. in width by ½ in. thick. This region terminates in a prominent transverse ridge or claw on one side (Text-fig. 1



Text-fig. 1. A. Plan of a Teifi coracle, showing the lath framework and the strengthening withy plait around the after part of the bottom. A portion of the seat is cut away to expose the basal bar into which fit the vertical pillars supporting the hinder edge of the seat. Cenarth. B. A paddle in face view, on the same scale. C. Enlarged view of the claw at the top of the paddle loom. The two holes in the seat for the carrying rope are omitted. For their position, see Pl. III, fig. 1.

B and C). The principal purpose served by this unusual modification is to enable the claw to be slipped under and thereby to engage the basal bar of the seat support when the coracle is hoisted upon the owner's back. The loom rests on his right shoulder, and thus adjusted the pressure of the carrying rope

across his chest is considerably reduced. The claw also affords a useful grip for the fingers of the right hand when paddling straight ahead with the paddle used over the bow; the left hand grips the loom about 15 in. lower down.

The paddling stroke has a figure-of-eight motion, with the blade kept continuously in the water. The usual method when going downstream with the net extended between two coracles is by means of a one-handed stroke, used by the arm on the side of the coracle opposite to that where the man's other hand holds the head-rope of the net. The man on the left of the net paddles with his left arm, he on the right with his right arm. In this way of paddling the hand grips the loom rather below its middle; the four fingers stretch downward on the fore side, with the thumb behind. The part of the loom above this grip is pressed obliquely against the arm, passing from the inner aspect to the outer at the level of the elbow, with the upper end of the loom pressed against the outer side of the upper arm (Pl. I, fig. 1). Thus disposed the arm has good control of the paddle and can work it in the figure-of-eight tractor stroke with the minimum of exertion. The flat side of the blade meets the water during the effective part of the stroke which is quite easy to acquire if the paddle be held in the correct manner.

When not engaged in netting, the coracle can also be propelled straight ahead by paddling over the fore end, either by the figure-of-eight stroke or by a scooping motion. In both cases the paddle is gripped with the two hands, one gripping the claw at the top and the other holding the loom some distance down.

Sheep-washing. Before the sheep-shearing season or before sheep are marketed, the Cenarth coracle men are sometimes employed by farmers to assist in the washing of sheep with a view to improving the colour of the fleece. Miss M. Wight witnessed the operation in June 1933 and describes it thus:

> The flock was taken to a place where the river bank was fairly high and rocky and there thrown one by one into the water, which is there very deep and swift, to swim across to the other bank. The coracle-men had taken up their stations, one above and the other below the washing place, and it was their business to see that no sheep got carried away. And it was no easy task, for some did get astray and were headed back, the coracle-men racing frantically to head them off, whilst one slipped on a rock near the landing place and had to be got on to its feet again....

FIG. 1. FRAMEWORK OF A TEIFI CORACLE, CENARTH
Note the semicircular withy band around the after part of the bottom and the hazel carrying rope.
By courtesy of Miss M. Wight

FIG. 2. FACE VIEW OF A TOWY CORACLE, CARMARTHEN
The paddle is specially long and without claw or knob at the upper end.

PLATE IV

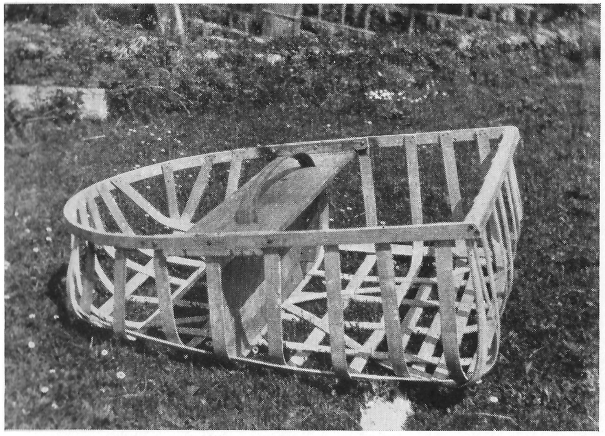


FIG. 1. OBLIQUE VIEW OF THE FRAMEWORK OF A CORACLE USED ON THE RIVER CLEDDAU, SOUTH WALES

Built by Mr G. W. Pike, Narberth.

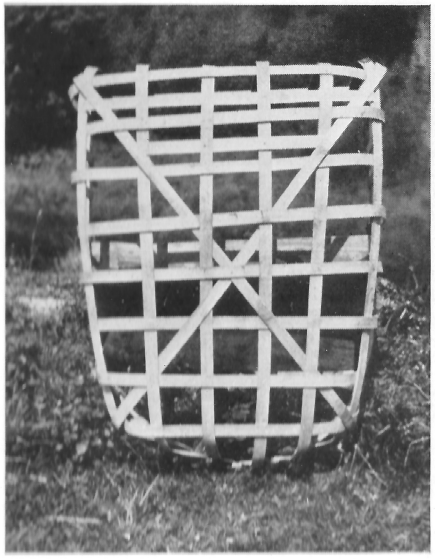


FIG. 2. BOTTOM VIEW OF THE CLEDDAU CORACLE

By courtesy of Mr G. W. Pike

FIG. 3. A CENARTH FISHERMAN CARRYING HIS CORACLE. SIDE VIEW

Photo by J. Hornell

Three times the flock was swum across the river and taken back over the bridge between each, to cross from the correct side. They had quite an easy landing, a flat shelving place from which the coracles usually start.

Probably the Carnarvonshire poet, Lewis Glyn Cothi (*circa* A.D. 1450), had seen some such scene when he wrote the couplet:

Ni charaf, mwy na'r ddafod
Gwrwgl byr gwargul a bâd,

meaning

I have no more liking than a sheep
For a short, bull-necked coracle or boat.[1]

Construction

The first thing to do is to go into the woods and cut enough stout branches of "Sally-wood" (sallow or willow, probably *Salix caprea*), some in lengths of about 8 ft. to make the longitudinal frames, and others about 5 ft. long for the transverse ones. A supply of hazel withies, 9 ft. long, have also to be collected. A deal plank for the seat, together with some 5 yards of unbleached calico and a quantity of pitch, lard (or tallow) and linseed oil complete the requisite materials.

The willow branches are cleaved in two, each half furnishing, when trimmed down with a knife or spokeshave, a stout lath, $1\frac{1}{4}$–$1\frac{1}{2}$ in. wide, and slightly lenticular in transverse section. The hazel withies are peeled and put to soak in water.

Before using, the laths are soaked in hot water or wrapped round with cloth dipped in boiling water, in order to render them more pliable. When ready, seven are laid parallel upon a floor or on a level piece of ground, spaced apart from 4 to 5 in. Ten short laths are interlaced with these at right angles, forming, however, only seven transverse frames, as the first three are each formed of two laths in order to give greater local strength. Lastly, two extra long ones are arranged saltaire fashion, likewise interlaced with the others. Adjustments by eye having been made, weights are placed at the principal points of intersection to keep the laths in position while being bent up. The next proceeding is to insert the seat and its supports by bending

1 *Poems*, edition of 1837, p. 187.

up the ends of the second and third transverse laths, counting from the after end, and passing them through slots made near each end of the seat plank.

The ends of two of the main longitudinal laths are next bent up and secured in the appropriate curve by cords stretched between; these serve as guides. The lowermost unit of the wattled gunwale is now begun. Usually it is started below the seat on the left side; then working forwards it is woven round the ends of the frames which are bent up successively as work proceeds. This plait makes a half circuit of the gunwale, ending a little in front of the seat on the right side. A similar semicircular plait is worked on around the after end of the framework, but instead of forming the under side of the gunwale it is bent down to form a semicircular strengthening band around the after end of the bottom (Pl. III, fig. 1). A second plait of withies succeeds, which is carried continuously the whole way around the tops of the upturned ends of the frames; this plait passes below the seat. In the same way the third plait is wattled on; its withies are stronger than those in the other two, as this plait forms the margin of the gunwale and has to stand heavy usage. It passes over the ends of the seat which are thus sunk about $1\frac{1}{2}$ in. below the top of the gunwale. Two men are needed during these operations, one to bend up and hold the laths, the other to do the wattling.

When the finished framework is set and dry, it is turned bottom up and given a coat of creosote or solignum to preserve it from rot. Afterwards unbleached calico is stretched tightly over it, the edges of the cloth being reflected over the gunwale and lapped on with thin wire; formerly twine was used for this purpose. Finally a coat of pitch boiled together with some lard and linseed oil is applied hot over the outer surface of the calico. The addition of lard and oil is made in order to prevent the pitch from becoming brittle and peeling off. Some fishermen, departing from the custom of their fathers, substitute tar for the lard and oil, but at Cenarth the older method is still followed. Tallow was an alternative to lard.

A carrying rope of twisted hazel bough is fitted to the seat as already described, and sometimes a round hole is cut in the

cover immediately below the gunwale at the tail end to drain water out of the coracle when carried ashore.

Dimensions

The size and proportions of these coracles vary considerably and are not standardised. The height and weight of the owner require consideration when under construction. Of three coracles measured, one (A) was built for a tall and heavy man; the second (B) for one much older who wished to save himself as much exertion as possible when carrying it, so had it made smaller and lighter than usual. The third is a better average than either of the others.

A. Length overall, on gunwale	60 in.
Greatest breadth at gunwale level (at 12 in. from fore end)	40·5 in.
Beam at seat (outside)	33 in.
Height from ground:	
Fore end	17·5 in.
After end	19·0 in.
Depth amidships to top of gunwale	13·5 in.
Seat:	
Width	10·5 in.
Thickness	$\frac{9}{16}$ in.
Gunwale:	
Width	$1\frac{1}{2}$ in.
Depth in fore compartment	4 in.
Depth in after compartment	2·5 in.
Weight about 34 lb.	

The bulge or bilge formed by the tumble-home of the sides in the fore compartment (forward of the seat) added between 5 and 7 in. to the width and about 4 in. to the length as measured at gunwale level.

B. This is a coracle used by Daniel Williams, one of the oldest and most expert builders at Cenarth:

Length on gunwale (outside)	50 in.
Greatest breadth (at widest part of fore compartment) ...	39 in.
Breadth at seat (outside)	33 in.
Depth amidships to top of gunwale	14 in.
Weight about 28 lb.	

C. This coracle belongs to Mr Alfred E. Griffith, Cenarth, to whom I am indebted for much useful information:

Length overall	54 in.
Greatest breadth (near fore end)	39 in.
Breadth at fore side of seat (outside)	34 in.
Depth to underside of seat	13 in.
Depth to top of gunwale, amidships	14·5 in.
Height from the ground:	
Fore end	16 in.
After end	19 in.

Weight when new, about 26 lb.

Weight when two years old after receiving a second coat of pitch, 29 lb.

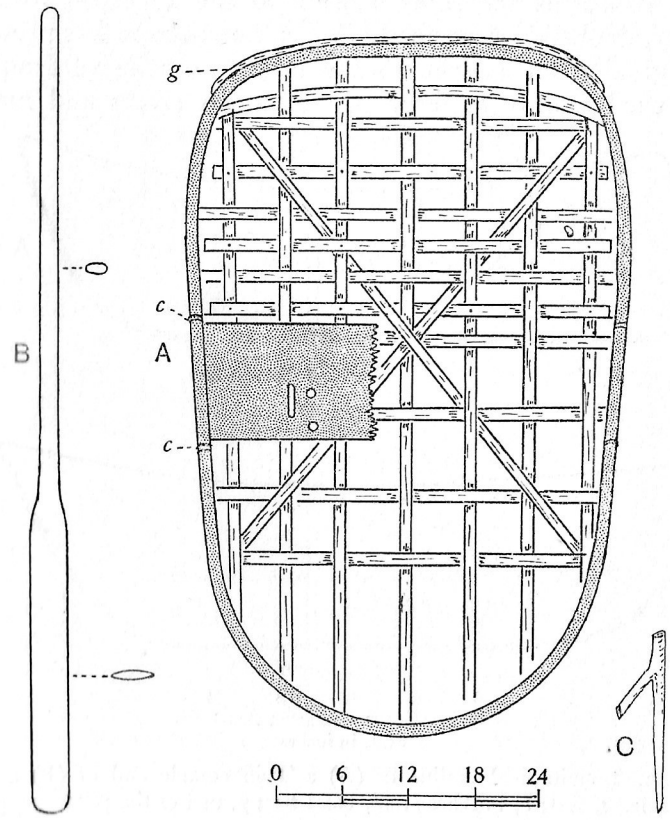
(2) The Towy coracle

Carmarthen on the river Towy is famous for the number and skill of its coracle fishermen. Thirteen pairs of coracles were still fishing with nets on the river in 1935, but under stringent regulations and subject to a licence fee of four guineas. The Ministry of Agriculture and Fisheries has sought to abolish this method of fishing in the interest of fishery conservation, but the gorge of all true Welshmen (other than rod-fishers and riparian owners) rises at this threatened inroad upon this relic of their ancient tribal customs. The fishermen complain bitterly; they say: "For over two thousand years our forefathers have fished with nets without depleting the river of fish, so why should we, poor, hard-working men, to whom net-fishing contributes the main part of our livelihood, be prevented from following our immemorial custom?"

But threatened men live long, and the Ministry appears now to be willing to tolerate netting so long as the number of coracles does not exceed in future a dozen pairs. This will, however, represent a reduction of more than 50 per cent. in number since 1929 when 50 coracles (25 pairs) were engaged in coracle netting. The course of recent reduction in the Towy Fishery District is shown as follows:

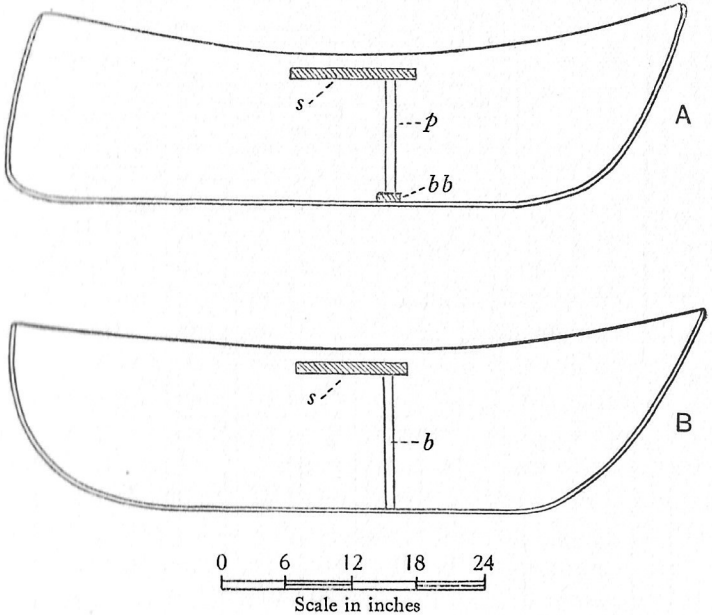
Year	1929	1930	1931	1932	1933	1934	1935
Pairs of coracles licensed	25	22	23	19	19	19	13

The Towy coracle is longer and with an elegance of form foreign to the short, squat Teifi type. The Teifi men do, however, pretend to despise the Towy design as departing from the ancient type, and to some extent this is correct. Thus the Towy men substitute sawn ash laths for cloven willow splints and a leathern carrying strap for the rope of twisted hazel, while



Text-fig. 2. A. Plan of a Towy coracle, Carmarthen. Part of the seat is cut away as in Text-fig. 1; one end of the carrying strap passes through the slit-like hole shown; through the two small round holes pass two of the pegs which hold the vertical bulkhead in position under the seat. *c*, *c*, cord lashings between upper and middle gunwale withy plaits; *g*, *gwragen*, a half-hoop protecting the gunwale at the fore end. B. A paddle on the same scale. C. A forked peg, used to hold down the laths during construction.

they have no plaited band to reinforce the after end of the bottom framing. Whether the general shape of the Teifi coracle conforms the more closely to the ancestral form is, however, doubtful. A perfectly round, bowl-shape was probably the original form as seen to-day in the coracles of Iraq and India, used mainly to ferry people across rivers and not for

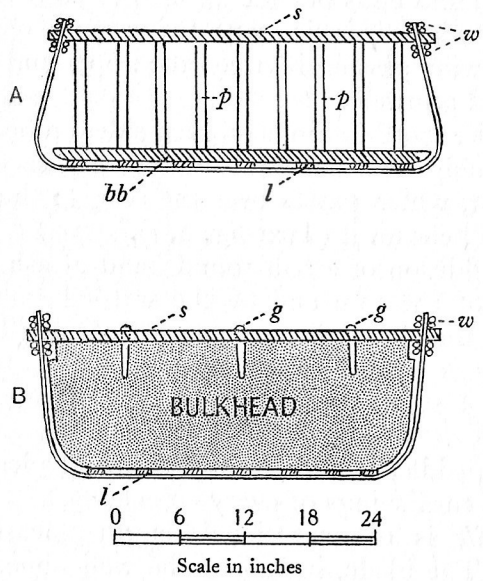


Text-fig. 3. Longitudinal outline of (A) a Teifi coracle and of (B) a Towy coracle. *s*, seat; *b*, bulkhead; *bb*, basal bar; *p*, one of the pillars supporting the seat.

fishing, which is a specialised and secondary use. If this be granted, both the Teifi and the Towy designs diverge therefrom by possessing a definite "head" and "tail", the former wide and deep, as is necessary for the hauling aboard of nets and heavy fishes, struggling to be free.

A typical Towy coracle is bluntly ovate in plan, the broad head more rounded than that of the Teifi design, and with practically no bulge below the gunwale either at the head or the sides. The region abaft the seat, called the "tail" locally, is also longer. The gunwale sheers gently to either end from amidships,

and though the tail sheers to as great a vertical height as in that of the Teifi coracle, this is much less conspicuous as the curve is more gentle, owing to the greater length of the frame, which averages about 5 ft. 4 in. as against about 4 ft. 6 in. in the case of the Teifi design. Width and depth are about the same.



Text-fig. 4. A. Diagrammatic section across a Teifi coracle behind the seat supports. B. A similar section across a Towy coracle. *g*, pegs holding bulkhead in position; *l*, longitudinal lath cut across; *s*, seat; *p*, supporting pillars resting upon *bb*, the basal bar; *w*, withy gunwale plaits.

Other differences from the Teifi design are:

(*a*) Although the number of longitudinal and of transverse frames is the same, seven either way, the fore compartment is strengthened, not by doubling the first three transverse frames, but by intercalating four short lengths of lath alternately with the first four transverse frames. These accessory laths do not extend up the sides (Text-fig. 2).

(*b*) The after region of the seat is supported upon a solid wooden bulkhead, held in place by three long pegs driven through the seat immediately abaft the bulkhead and projecting

behind it; two similar pegs project downwards on its fore side (Text-fig. 4). The under edge of the bulkhead is tied or wired to the laths beneath.

(*c*) Instead of the edge of the calico cover being reflected over and bound to the top of the gunwale with wire, it is turned in upon itself and ends outside an inch or so below the top of the gunwale, where it is tied with twine to the ends of the lath frames, the twine passing between the upper and middle plaits of the wattled gunwale.

Stout vertical cord lashings on each side, immediately before and immediately abaft each end of the seat, secure the upper gunwale plait, which passes over the seat, to the middle plait which passes beneath it (Text-fig. 2, *c*).

(*d*) The addition of a half-round band of ash (*gwragen*) on the outside of the fore end of the wattled gunwale to give protection at the place where most wear occurs (Text-fig. 2, *g*).

Equipment

Besides a paddle, a bailer, a short club and a leather carrying strap are the furnishings of every coracle.

The *paddle* is of exceptional length, measuring overall 6 ft. 1½ in. The blade, including the well-sloped shoulder, is 2ft. 6 in. long, the loom 3 ft. 7½ in. The sides of the blade are parallel; in section it is slightly biconvex. The loom is cylindrical in section and of equal diameter throughout; it is without either crutch or knob at the free end (Pl. III, fig. 2 and Text-fig. 2). Paddles are made either of oak or of ash; according to William Elias oak is preferable.

The *bailer* is a shallow wooden bowl, obtained usually from the old turnery at Henllen. The diameter of one measured was 5¾ in., with a depth of 2 in. It is carried under the seat at one side, secured in place by a leather band, nailed at each end to the underside of the seat.

No coracles except those of the Towy carry bailers. The reason assigned is that these work in broad tidal water, often rough and broken, whereas those elsewhere are used in narrower and usually quieter waters.

The *club*. Known in Welsh as *cnocer* ("knocker"), this is a short, stout baton with expanded head used to stun and kill salmon when thrown out of the net into the fore compartment of the coracle. A lusty salmon is a dangerous guest in a flimsy coracle, and the cnocer is used with the utmost promptitude to quieten it. In the flurry of the moment, the fisherman has been known to miss his aim and to burst a hole in the calico bottom. I asked my informant what is done when this happens. Snatching off his cap, he hurled it on the ground and precipitately thrust one foot down upon it. "Then you paddle for the bank as if the devil was after you", said he, "and there put a patch over the hole." Usually a piece of old pitched coracle cover is kept handy in a pocket; if not, the fisherman cuts a piece out of the coracle's cover at the tail end below the gunwale, strikes a match with which to soften the pitchy edges and claps it over the damaged part. This is quite an efficient repair, good enough to enable him to finish his day's work before returning home.

The space under the seat forms a storeplace for the catch of fish; going to the river the dry net is carried in it, but on the homeward way, the bundle of wet net is carried on the top of the coracle (the fore end) so that its drip will flow down the back (bottom as carried).

Length of cnocer 14 in.; diameter of head knob 2 in.; of small grip knob 1⅝ in.; of shank 1⅛ in. It is usually made of pitch pine; boxwood is also used, but William Elias, the leading coracle fisher in Carmarthen, prefers pitch pine; he says boxwood is so hard that sometimes its blow forces out the salmon's eyes, and "this looks ugly on the fishmonger's counter".

To-day the ends of the leather thong that holds the cnocer in place on the seat are nailed on; formerly the two ends passed through slots in the seat and were secured below from pulling through by means of a wooden pin passed through a hole in each end of the thong.

Carrying strap. A broad leather band takes the place of the primitive hazel "cord" used on the Teifi. Each end is passed through a slot near one end of the seat; the two slots are about 19 in. apart. As the fisherman passes his head and shoulders through the strap when carrying his coracle, its length depends

upon his chest measurement. Each end is secured under the seat by a peg passed through a slit or hole made in it, or, in modern fashion, by nailing to the seat. Width of strap 1½ in.

Method of construction

Except in details this is similar to that followed on the Teifi. The most notable difference occurs when the seven longitudinal, seven transverse and two diagonal laths have been interlaced in position prone on a flat plot ground (*not* on a board or flooring). Instead of fixing their position by superposed weights, the main crossings, those near where the laths are to be bent up, are kept immovable by means of forked pegs, called "hooks" (Text-fig. 2 C), driven into the ground in such a way that the forked ends straddle the crossings of the laths at all important points. From ten to sixteen of these hooks are used as available. Each is from 12 to 14 in. long along the main limb; the side branch, about 5 in.

The rest of the operations follow the same course as in the Teifi coracle, except that the posterior semicircle of hazel plait which in the Teifi coracle forms a strengthening band round the after part of the bottom, is here moved up and forms a third and undermost semicircular unit in the wattling of the posterior part of the framework.

Dimensions

The length of the coracle is determined by the height of the man for whom it is made. It is taken to be sufficient if it clears the top of his head when standing up; a man 5 ft. 6 in. in height requires one about 5 ft. 7 in. long.

The measurements of three coracles are shown in the table on p. 37.

It will be noticed that there is a fairly wide range in the longitudinal measurements, whereas the others show close agreement. The longitudinal differences increase with age through the custom of standing these coracles up on their tail, which thereby is shortened and broadened by the strain set up.

The weights of these three were respectively 27, 31 and 28 lb. When new the weight is less than when it becomes old; patching and "retarring" add materially to the weight.

	A		B		C	
	ft.	in.	ft.	in.	ft.	in.
Length over-all	5	2	5	8½	5	4
Greatest breadth (near fore end) over-all	3	4½	3	4½	3	4
Breadth outside at fore end seat	3	3	3	3	3	3
Height from the ground:						
At fore end	1	5½	1	4	1	6
At after end	1	7	1	6½	1	8
Depth amidships to top of gunwale	1	4	1	3½	1	2½
Seat:						
Width	0	11	0	10¾	0	11
Thickness	0	1	0	1	0	0⅞
Width of gunwale	0	1½	0	1½	0	1½
Length from head to front of seat	2	1½	2	6	2	2½
Length from tail to back of seat	2	1½	2	3¾	2	2½
Radius of tail curve in plan	1	7	1	8	1	6½

Distance apart of the longitudinal laths, about 6 in.; distance apart of the transverse laths, from 6 to 6½ in.; centre to centre in both cases.

(3) The river Taf

The Taf is a short river, emptying into an estuary common to it and the Towy. Net fishing is still permitted, three licences being in force in 1935, but these are to be reduced to two in the near future. The fishermen's headquarters are in the village of Lower St Clears; their "trawl beat" is between there and Laugharne, the tidal portion of the river.

That coracles are used for other purpose than fishing is illustrated by a legend[1] which alleges that the town and castle of Laugharne are plagued with ghosts. Among these is that of Admiral Laugharne, a noted character in old days, who is said to appear naked, furiously ferrying himself across the stream in a coracle, bailing it out the while with a cocked hat.[2]

Although St Clears is only some 8 miles from Carmarthen, the old design of coracle has suffered great modification. The size and general shape of the framework agree with the Carmarthen design, but instead of a wattled gunwale, one shaped out

1 *South Wales Evening Post*, 20 June, 1935.

2 Although the Laugharne family have had long connection with the Navy, the only one to reach flag rank was Vice-Admiral John Laugharne, who died at Laugharne on October 12th, 1819.

of planking is used. This, while not so neat in appearance, has the advantage of demanding less skill in construction. Wattling is a difficult art to acquire for it is a branch of basket-making, whereas any man handy with ordinary tools can cut out the sections required for the gunwale, piece them together and connect up with the lath frames.

The lattice part of the framework consists of seven longitudinal frames interlaced with either five or six transverse ones, all made of rough laths, $1\frac{1}{4}$–$1\frac{1}{2}$ in. wide. No diagonal laths are present but two or three short accessory laths, to strengthen the bottom under the feet, may be intercalated with several of the foremost transverse frames.

The ends of all the frames, bent up in the usual manner, are inserted, after being whittled down to cylindrical points about $\frac{3}{8}$ in. in diameter, into vertical holes made at intervals in a broad gunwale frame of thin board; this takes the place of the wattled gunwale of the Teifi and Towy coracles (see Text-fig. 5).

The seat is set flush with this gunwale, cleats below joining it to the gunwale frame which does not extend beneath the seat. The partition supporting the after border of the seat is made of a number of broad strips of thin board set vertically at short intervals apart. These are nailed below to a basal bar extending across the bottom, while above they are nailed to a long cleat screwed to the underside of the seat.

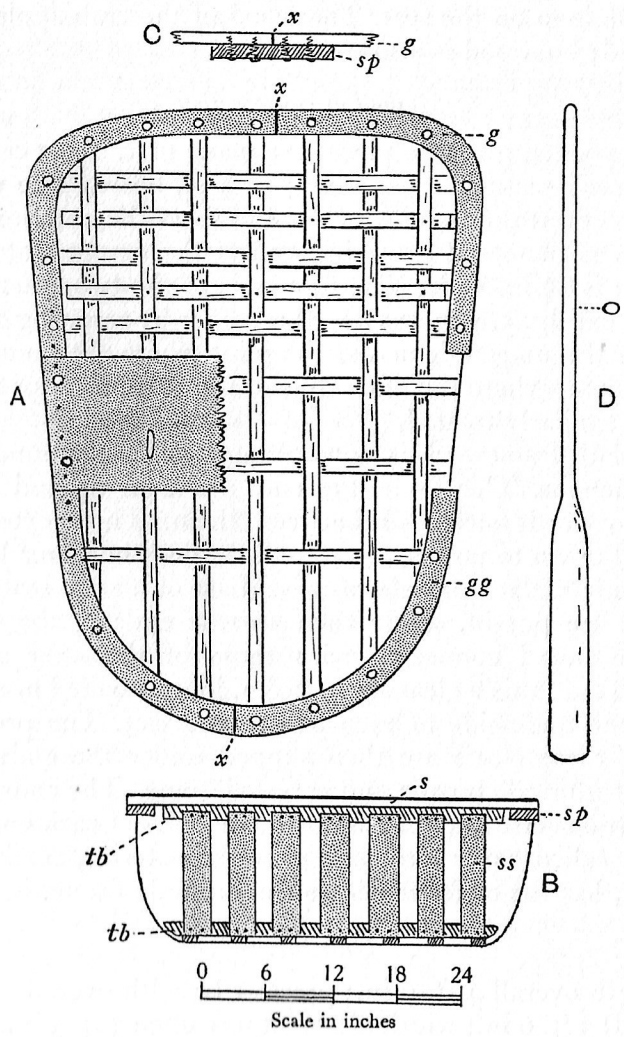
The cover is of calico, coated with a mixture made by boiling 1 lb. of pitch with $1\frac{1}{2}$ lb. of Stockholm tar.

A round drainage hole is cut in the cover at the tail end, high up, for the easy emptying of water when the coracle is taken out of the river.

Equipment

The paddle is of the Towy type, 5 ft. long; it has a plain cylindrical loom and its blade, 2 ft. long, has parallel sides and gently sloping shoulders. A leather carrying-strap is carried, the ends secured by pins under the slots in the seat.

No bailer is used; none is required, as the men do not fish when the tide is high and running strongly.



Text-fig. 5. The river Taf coracle. A. Face view with seat partly cut away. *g*, a segment of the fore gunwale; *gg*, segment of the after gunwale. B. Transverse section through the coracle at the hinder margin of the seat; *s*, seat; *ss*, slats supporting the seat and attached above and below to transverse bars (*tb*). C. Method of connecting the ends of two gunwale segments; *sp*, splicing piece below joint *x*, screwed on by four screws. D. A paddle. All to the same scale.

A cnocer is carried in the pocket as being handier than when kept in a loop on the seat. The wood of the crab-apple tree is preferred; boxwood is also used.

Method of construction

The wooden gunwale pieces are made first. They consist of four curved sections sawn from $\frac{3}{8}$ or $\frac{1}{2}$ in. board. The width is 2 in. except at the parts which are to form the anterior angles where it is increased to $2\frac{7}{8}$ in., and at the extreme after end, where it is $2\frac{1}{4}$ in. wide. The fore ends of the two anterior sections (Text-fig. 5, *g*, *g*) are keyed together by screwing a strong cleat on the underside across the joint where they meet. The median joint where the after ends of the two posterior sections meet is similarly treated.

The lath framework is now arranged on the ground in the usual manner. This done, the ends are bent up and held in place by cords stretched between them. Their extremities, whittled down to points, are passed through holes made in the now semicircular gunwale boards. Last of all the seat and its support are put in. Only then are the ends of the forward gunwale board connected with those of the after gunwale board. To do this a cleat about 20 in. long is nailed or screwed across the underside of each end of the seat. The projecting ends of these cleats are then slipped under the ends of the adjacent gunwale boards and screwed home. The ends of two of the transverse frames pass through holes at each end of the seat. A calico cover stretched over the exterior, in the usual manner, has the edges nailed to the gunwale frame.

Dimensions

Length overall 4 ft. 9 in.; greatest breadth overall (near the fore end) 3 ft. 6 in.; width of seat at fore edge 3 ft. 3 in., at after edge 3 ft. 1 in.; depth to top of seat $12\frac{1}{2}$ in.; weight about 33 lb.

(4) The river Cleddau

A single pair of coracles are all that remain on the eastern branch of this river; none is to be found on the western. The pair on the eastern branch belong to Mr G. W. Pike, Blackrock Flour Mills, near Narberth, and although he has been building and using the same design for over forty years, there can be no doubt that it represents a modern and much altered modification of the one characteristic of the Teifi river. Two other pairs which worked on the river at Llawhaden in 1934, have had to cease operations as the owner of their stretch of the river refuses to allow of net fishing.

As will be seen on reference to Pl. IV, figs. 1 and 2, the Cleddau type has the same short, squat form, the same deep, wide, square fore end and short, rounded "tail" as that of the Teifi. Clear evidence of its origin is afforded by the form and size of the paddle. This is 4 ft. 3 in. long, made up of a short blade, 2 ft. by $3\frac{1}{4}$ in., and a loom ending in a transverse claw grip, identical with that of the Teifi paddle.

The figures referred to show the details of construction clearly. The frames are sawn ash laths, $1\frac{1}{4}$ by $\frac{1}{4}$ in., bent up and nailed to the inner side of the gunwale. Six frames run longitudinally; eight, interlaced, run transversely and two run diagonally, corner to corner, crossing beneath the seat. Two accessory strips are riveted under the feet to give extra strength. The gunwale, which is without sheer, is in two sections: (*a*) a stout strip, $1\frac{1}{2} \times \frac{1}{2}$ in., set vertically, bent into a deep U-shape, forming the sides and after end, and (*b*) a strong, straight, squared bar, across the front, to which the ends of the lateral gunwales are screwed. The seat is placed midway along, its ends screwed to the underside of the gunwale. Below is a solid bulkhead board fitted tightly between the seat and the floor at about 3 in. distance from the back edge of the seat to which it is screwed. The cover is of Hessian canvas coated with a mixture of pitch and tar.

Dimensions

Length 4 ft. 4 in.; breadth 3 ft. 4 in.; depth 14 in. at the fore end, 13 in. under the seat and about 10 in. at the after end. Width of seat 12 in.

(*To be continued*)

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BRITISH CORACLES

By James Hornell

Part II

THE USK AND WYE RIVER SYSTEMS

On the rivers Usk and Wye, and on their main tributaries, of which the Monnow and Lugg are the most important, coracles were regularly employed by fishermen until a few decades ago. No one uses them at the present time, and the last one in use on the Usk was imported from south-west Wales. Of the home-made article two only are known to have survived, although there is still, alive and well, a Monmouth fisherman, Mr A. G. Morgan, who has made coracles both for his own use and for others—the Morgans in their time were the most noted of the Monmouth coracle fishermen and coracle builders.

The Usk

The earliest record of the use of coracles in the Usk region is one by Camden. In his *Britannia*,[1] published in 1586, he tells us that

> Two miles to the East of Brecknock, is a large Lake, which the Britains call Lhyn Savedhan and Lhyn Savadhan [Llyn Safaddu]....In English 'tis called Brecknockmere: it is two miles long and near the same breadth, well stored with Otters, and also Perches, Tenches and Eels, which the Fishermen take in their Coracls.

As on other rivers rising in Wales, coracles were in use on the Usk both for netting and angling. J. H. Clark,[2] writing about 1892, gives the only account I have been able to find. (This and other references to coracles in this region, I owe to the courtesy of Lord Raglan.) Clark says:

> At Usk the Angler finds good sport, and up to the year 1854 many of the inhabitants gained their livelihood a great portion of the year by netting and angling. During the season, ten or a dozen fishermen were to be seen carrying their coracles on their backs in going to and returning from their avocation....Their shape resembled the section of a walnut shell; the length was about five feet, and the breadth about four, with a seat placed across the centre; they were made of thin

1 *Camden's Britannia*, translated by E. Gibson, column 590, London, 1695.
2 *Usk Past and Present*, Usk, N.D. pp. 161–2 (about 1892).

hoops crossed, with very strong basketwork edges, and covered with strong coarse canvas, thickly coated with pitch... the fisherman might often have been observed to work his paddle with one hand while he conducted the net with the other, at the same time holding a line in his teeth....

They [the coracles] seldom weighed more than thirty or forty pounds each, being manufactured to suit the individuals for whom they were intended. The fisherman somewhat resembled an amphibious animal; when he came to a very shallow part of the river, or when his labour was over, he slung the boat across his back by means of a leather strap attached to the seat....On the banks of the Usk, Wye, and other fresh water rivers, these coracles were to be seen hanging at the doors of many of the cottages.

They were also used singly by anglers, and this method outlasted the older by many years. The last regular coracle user on the Usk was Mr Thomas Rees, who, for fully 40 years, fished for salmon during each recurring season (Pl. I, fig. 3). Many were the coracles he had in his time; the last (and probably others) was made for him by one Tom O'Neill, an expert fisherman and coracle maker, who lived, it is said, in a cave on the Wye between Monmouth and Symond's Yat, and by repute the most inveterate salmon poacher in the district.

Another expert coracle builder, dead some 60 years ago, was Mr Wm. Cruse, a basketmaker and fisherman of Usk, whose grandson is at present the cricket professional of the Hampshire Cricket Club.

With the death of Mr Rees in 1933, coracle angling may be said to have passed away, though Mr R. Windsor Rickards, J.P., of Usk Priory, occasionally used a Cardigan-built coracle on the lower reaches of the Usk, where he has private fishing rights, for some years after Mr Rees gave up angling.

The Wye

The story of the coracle on the river Wye is much the same as on the Usk. Until 1914, coracles were in use on this river and the Monnow, but with the passing of many things that has been one of the consequences of the Great War, coracles on these waters have become as extinct as the Dodo.

Notices of coracles are, however, numerous in old travel books dealing with Monmouthshire. The earliest is one in

Sir John Hawkins' edition[1] of Izaak Walton's *Compleat Angler*, published in 1760. Here in a footnote Hawkins says:

In the Wye, which runs through Monmouthshire and Herefordshire, I have taken with an artificial fly, very large ones [grayling]; as also great numbers of a small but excellent fish, called a *Last-spring*....They are not easily to be got at without a boat, or wading, for which reason those of that country use a thing they call a *Thorrocle*, or *Truckle*; in some places it is called a *Coble*, from the Latin *Corbula*, a little basket: it is a basket shaped like the half of a walnut-shell, but shallower in proportion, and covered on the outside with a Horse's hide: it has a bench in the middle, and will just hold one person, and is so light that the countrymen will hang it on their heads like a hood, and so travel with a small paddle which serves for a stick, till they come to a river: and then they launch it and step in: there is great difficulty in getting into one of those Truckles; for the instant you touch it with your foot, it flies from you; and when you are in, the least inclination of the body oversets it. It is very diverting to see how upright a man is forced to sit in these vessels, and to mark with what state and solemnity he draws up the stone which serves for an anchor, when he would remove, and lets it down again: however it is a sort of navigation that I would wish our piscatory disciple never to attempt.

W. Coxe, who passed through Monmouthshire in 1799, has a similar tale to tell:[2]

During the course of the navigation from Ross, we passed several small fishing craft, called Truckles[3] or Coricles, ribbed with laths or basket work, and covered with pitched canvas. Like a canoe, the coricle holds only one person, who navigates it by means of a paddle with one hand, and fishes with the other; these boats are so light, that the fishermen throw them on their shoulders and carry them home.

That these coracles were also used in pairs for salmon netting as still practised on the Towy and Teifi is attested by the anonymous author of a work published in London in 1805, entitled *Travels in Great Britain*.[4] In it he says:

Many salmon are caught at this place, which is five miles [upstream] from Monmouth. Here we saw several boats, called coricles, peculiar to this part of the river....As we were setting off [from Monmouth], we saw two men going out in their coricles to fish. Each man lays hold of one end of a net, about 20 yards long, and paddles down the river, till they feel a strike. They then haul it up as quick as possible, and draw it on shore. They paddle along at a great rate, and put us much in mind of what we read concerning the Indians in their canoes.

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1 London, 1760, pp. 143–4.

2 *Historical Tour through Monmouthshire*, Brecon, 1904, p. 282.

3 "Truckle" is still in use in this area as the local term for coracle; a large round vat goes by the same name.

4 Vol. II, pp. 39–40. The actual author was the Duke of Rutland.

Coming to recent years we find Mr Robert Pashley, of Ross-on-Wye, well known as one of the most expert salmon fishers in the country, quoted by Mr H. A. Gilbert[1] as follows:

As far as I am aware there is only one of the old coracle men, who fished with rod for salmon, left on the Wye, and he resides at Kerne Bridge in my parish—his name is William Dew.... Only a fortnight ago he told me how he was crossing the river with his fly trailing overboard when a salmon took it and he was only just in time to seize the rod; he sold that fish to my mother.

He used a reel, but others only had a large cork bung on a short piece of cord attached to the rod butt, and on hooking a fish the lot was heaved overboard. The rod, etc., played the fish, and directly he rested the fisherman paddled after his bung and gave it a pull to start the quarry off again.

In a letter dated 8th July, 1935, Mr Pashley informs me:

In pre-war days I was the Captain of the Bishopswood and District Cricket Club for many years and our ground adjoined the river Wye, the bank of which was netted. Visiting batsmen always tried to top the net as this brought out the late Mr William Pritchard and his coracle, and afterwards his nephew Mr Wm. Jenkins (who is still alive) became the official retriever, with his coracle, to the cricket club.

Most of the coracles were in use on the Wye from Hereford downstream and probably more were in the Ross to Monmouth district than elsewhere. Coracle men as a rule made their own, but Mr Wm. Pritchard made quite a number for sale. He and the late Mr Wm. Dew used to race their coracles at Lydbrook Sports.

Mr Wm. Dew was, I believe, the last coracle fisher (he died 1933); he fished for trout and coarse fish for years after he finished salmon fishing but I think one of the Phelps family of Lydbrook actually fished for *salmon* after Dew ceased but predeceased him.... I have seen no coracles in use on the Wye since the War.

Mr H. C. Hatton, Fishing-tackle Dealer, Hereford, has in his possession an example of an old-time coracle rod and line as used formerly on the Wye. The rod is of elm, short and stiff, and shaped like a billiard cue, tapering upward from a stout and heavy butt. Its length is barely 8 ft. The line is of horse-hair, about 24 ft. long, tapering from a diameter of 3 mm. down to six hairs at the end.

Construction

The Usk and the Wye coracles were identical in construction. Text-figs. 1 and 2 and Pl. I, fig. 3, show that the normal form and the method of carrying on the back were closely related

1 *The Tale of a Wye Fisherman*, London, 1929, p. 36.

to what we see to-day at Carmarthen; the main differences were that the gunwale in the Usk and Wye coracles had no sheer, while the length of the after-section abaft the seat was usually greater than that of the section in front of the seat (see Text-fig. 2).

Text-fig. 1. Coracle fisherman, Ross-on-Wye, from an old illustration in the *Ross Gazette*. The fore-end is upper.

Mr A. C. Morgan, Monmouth, who built and used coracles in his youth, recently made for me a model. From this and the details that he was kind enough to furnish, we find that the ordinary fishing coracle was from 5 ft. to 5 ft. 6 in. in length, with a beam of 2 ft. 8 in. to 2 ft. 10 in., and a depth of about 15 in. In plan it approached closely to the Towy design, being broad and deep at the fore-end, rounded at the stern, with the bottom curving up gently at this end. The sides were parallel for most of their length, and the gunwales were almost, if not quite, horizontal.

The framework consisted of seven longitudinal and seven, or rarely eight, transverse laths crossing one another at right angles, with two diagonals, all arranged after the Towy fashion. When a coracle was to be begun Morgan states: "I used to go to the sawyer and say 'Rip me out a set of laths'." These had to be split from willow logs (sally-wood); sawn laths were not considered satisfactory, width $1\frac{3}{4}$ in. to 2 in. These laths were soaked in water for two days before use. When judged pliable enough, they were laid on the ground and interlaced at the proper distances apart. Then the main crossing points were secured either by means of forked pegs driven into the ground (Carmarthen method) or were held down by weights (Cenarth method). This done the ends of the laths were bent up and secured in position by plaiting withy bands around them at gunwale level. The ends of two of the transverse laths a little

in front of mid-length were the first to be bent up; these were passed through slots in the ends of the seat. Amidships rigidity was obtained by inserting a solid deal partition of template form beneath the seat. This was tied below at two points to the lath framework and above at two corresponding points to the seat, the sewing passing through two small holes forward of each of the slots made for the carrying strap.

The withy gunwale plaits were arranged in such a way that if a plait was begun on the left behind the seat and circled forward clockwise, the end of its half-circle had to finish on the right in front of the seat; the complemental semicircle reversed this procedure—it started in front of the seat on the right and then circled round the stern to end and interlock with the beginning of the fore-end plait, behind the seat on the left.

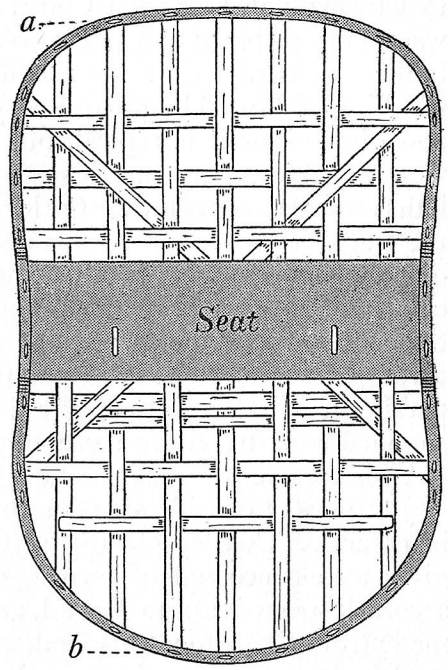
A wooden mallet for killing the fish was carried, made preferably of apple or pear wood. A bailer was considered unnecessary.

The cover was of stout calico and was usually called the "hide" of the coracle. The fishermen's wives made the cover; after stretching it over the frame and lashing it on below the upper plait of the gunwale, a coating of a mixture of pitch and gas tar was applied on the outside. Afterwards the coracle was taken (in Monmouth) to the Gas Works and left in one of the retort houses for 24 hours in order that the mixture should thoroughly permeate the fabric of the cover. After being brought home, a second coating of the same mixture was applied. The mixture was tested in the following way: A stick was dipped into it and brought out with a small blob of the stuff on its end. After a few seconds it was passed between the fingers and then, if it stretched and did not crack, it was considered to be of the right consistency.

The paddle used was 5 ft. in length, with a parallel-sided blade, 18–21 in. long (Text-fig. 9*a*). The loom straight, cylindrical and without crutch.

The time occupied in making the framework is given by Mr Morgan as three evenings, and the price charged complete with paddle from 30*s*. to 45*s*. The last Monmouth coracle was made in 1915 for use on another river.

A fine Wye coracle recently acquired by the Hereford Museum belonged to the late Mr William Dew of Kerne Bridge (Text-fig. 2). As in the model made for me by Mr A. C. Morgan, and now in the Science Museum, London, the section abaft the seat is longer than the section forward of the seat, the two being respectively 2 ft. 1½ in. and 1 ft. 11½ in. in length. Other dimensions are: total length 5 ft.; extreme beam near fore-end 3 ft. 3½ in.; beam at seat 3 ft. 2 in.; beam midway between seat and stern 3 ft. 3 in. (all beams are outside measurements); height at fore-end and at seat 14½ in., at stern 15½ in.; depth 13½ in. amidships; number of longitudinal laths seven; of transverse ones seven, with a short accessory one behind the sixth lath and another behind the seventh; this last is necessary on account of the extra length given to the tail in Wye and Usk coracles. Two diagonal laths also present crossing below the front of the seat. Carrying strap—a leather band, in the usual position. The laths are of ash; the withies of hazel. All laths are interlaced. The paddle is similar to that seen in Text-fig. 9*a*. This coracle is slightly broader and the tail rather shorter than was usual in typical Usk and Wye coracles, according to Mr A. C. Morgan. However, within certain limits the proportions of a coracle were adjusted to suit the height, weight and age of the owner; hence a certain variability in each type.



Text-fig. 2. Plan of a River Wye coracle. This belonged to Mr W. Dew, the last of the Wye coracle fishermen; it is now in the Hereford Museum. *a*, the fore-end; *b*, the after-end.

A few coracles were made in years gone by by Mr H. Dowell, Boat-builder, Ross-on-Wye. One of these survives; it belongs to Mrs Moffat, Goodrich Court, near Ross, for whose son it was made prior to the Great War. As a professional boat-builder constructed it the details depart considerably from the design followed by the ordinary fisherman. In general form and dimensions it is typical, but the units in the lath framework are riveted together instead of being interlaced and the laths are sawn, not split. As the longitudinal laths are outermost, the transverse ones cross them on the inner side, with the two diagonal laths inmost of all. Another difference is that two carrying straps are present, ringing the seat, one near each end; this arrangement permitted the carrier's arms to be passed through instead of a single strap passing across the chest. The paddle is also abnormal, the blade broadly spathulate; a rounded cross-bar forms a crutch grip at the top of the loom.

This coracle was made about 22 years ago.

Journeys of considerable length were sometimes undertaken in coracles. Charles Heath, in his *Excursion down the Wye*,[1] gives a long account of a voyage said to have been made in a coracle from Ross to Bristol, and Gilbert[2] mentions others made from Chepstow to Bristol.

Coracles were sometimes made specially for racing. These, according to A. C. Morgan, were notably longer than fishing coracles, and both ends were alike and well rounded, giving an elliptical shape in plan. When racing the paddle was used in scooping fashion, over the fore-end.

THE RIVER SEVERN

No records exist of the use in recent times of coracles on the Severn below Worcester. They continue to flourish on the river, but their range is restricted to the stretch between Shrewsbury and Arley. This distribution marks a considerable shrinkage since the landmark date of 1914, when the coracle range extended from Welshpool down to Bewdley, a distance of approximately 60 miles as against some 35 miles to-day.

1 Monmouth, 1799. 2 *Loc. cit.* p. 36.

Even so, this short stretch still yields two distinctive types of coracle design, one oval and bowl-shaped, which I shall call the Ironbridge type, the other characteristic of the Welshpool-Shrewsbury area, the Upper Severn type, which is in turn divisible into three varieties.

Of early records the first is one by the observant Camden. In his *Britannia*[1] dating from 1586, when writing of the Severn, we find him stating:

> Here is much us'd by the fishermen a small thing call'd a *Coracle*, in which one man being seated, will row himself with incredible swiftness with one hand, whilst with the other he manages his net, angle, or other fishing tackle. It is of a form almost oval, made of split Sally-twigs interwoven (round at the bottom), and on that part next the water cover'd with a horse-hide. It is about five foot in length, and three in breadth; and is so light that coming off the water, they take them upon their backs, and carry them home.

Camden does not specify any particular locality on the Severn, but we find Capt. Richard Symonds in his *Diary of the Marches of the Royal Army during the Great Civil War*,[2] recording the observation

> Medeley [Madeley, near Ironbridge]. Upon this river of Seaverne they use here a little boat for one to sitt in; they call them corricles, laths within and leather without.

Another old record is the announcement of a coracle race to be held near Llandrinio Bridge, just north of Welshpool, on May 28th, 1798; the prize was a silver cup, value five guineas. The advertisement of the race mentioned that about twelve coracles were expected to start. "Three have entered: the *Nancy the Rower*, in red; the *Peggy*, in blue; the *Lucy*, in green."[3]

Other evidence of the continued usefulness of the coracle in the lives of the people in the same locality is furnished by the experience of Mr Samuel Ireland when collecting his *Views on the Severn* (published in 1824). While at Buttington, near Welshpool, he tried to obtain a boat to carry him down the river to Shrewsbury, but, alas! the only "aquatic conveyance

1 *Op. cit.*, column 553.
2 Quoted in *Salopian Shreds and Patches*, VII, 119, Shrewsbury, 1885.
3 *Bye-gones, relating to Wales and the Border Counties*, Sept. 1876, p. 116, Oswestry, 1876–7.

that presented itself" was a coracle and this he seems to have rejected.[1]

Last of all these scanty notices of the Severn coracle is that by Mrs J. F. Parker: writing in 1933,[2] she says that in 1446 the only method of crossing the river in the neighbourhood of Bewdley was by two fords "or by coracles, which are still found in country districts up the river".

River Avon. Coracles appear also to have been used on the Worcestershire Avon in the seventeenth century, for we find J. Aubrey[3] writing in 1696: "The boats on the Avon . . . were baskets of twigs covered with an ox-skin, which the poor people of Wales use to this day, and call them curricles." Even to-day coracles are in use on this river near Evesham, but it is a recent introduction and is not the continuation of local tradition so far as I know.

The Ironbridge Type

On the Severn between Ironbridge and Arley, bridges over the Severn are still few and far between, so, as in old time, the people living on its banks continue to utilise the coracle as a cheap and handy way of crossing. Formerly nearly every cottager had his own coracle, hung in a tree when not in use. To-day the numbers of such coracles are much reduced and they are no longer hung in trees—campers and visitors are not trusted!

Apart from ferry work coracles serve several other purposes, particularly during floods when the river comes down in turbulent spate, drowning the lowlying fields. At this time felled timber often becomes flotsam; rabbits, too, driven from their burrows by the flood, scurry to higher ground. Here they often find themselves marooned on islets surrounded by swirling waters. Others seek precarious refuge in the tops of partially submerged hedgerows. Now come out the coracle

1 *Salopian Shreds and Patches*, VII, 69, Shrewsbury, 1885.

2 "Old Bewdley and its Industries", p. 3. (*Trans. Worcestershire Archaeological Soc.* for 1932, Worcester, 1933.)

3 *Miscellanies upon Various Subjects*, 4th edn, London, 1857, p. 211. (First published in 1696.)

FIG. 1. AN IRONBRIDGE RABBIT-CATCHER (MR H. ROGERS) AFLOAT IN HIS OVAL CORACLE

Photo by J. Hornell, 1935

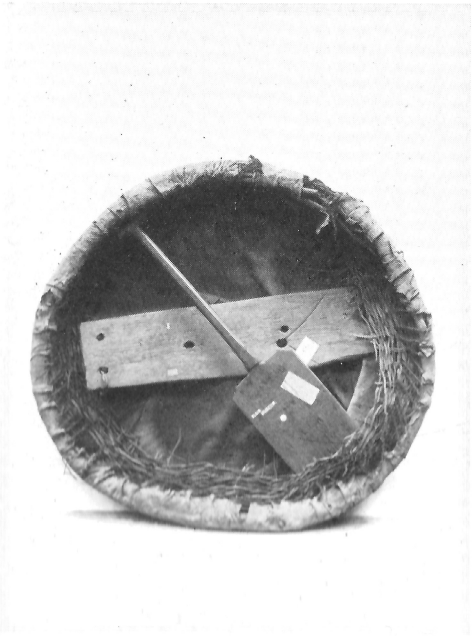


FIG. 2. SCOTS CORACLE FROM THE

FIG. 3. THE LAST LOCALLY MADE

FIG. 1. THE LAST WELSHPOOL CORACLE FISHERMAN (MR S. PHILLIPS) AND HIS CORACLE

FIG. 2. LLANGOLLEN TYPE OF TWO-SEATER CORACLE AND ITS BUILDER, MR ISAAC ROBERTS

Photo by F. Harrold, 1935

men, some to retrieve what they can of floating logs, and others to net the rabbits huddled in fright on their island refuges.

For work of this description a less clumsy model of coracle is required than that favoured by salmon fishers; some stability has to be sacrificed to speed and to readier manœuvring power. As a result the design has become stabilised in the form of a shallow oval bowl (Pl. I, fig. 1). For ordinary usage the two ends are equally rounded; when built for racing purposes, the fore-end is built sharper than the stern and the length is increased.

Ironbridge is the present centre of bowl-coracle usage. Here the Severn brawls through a deep gorge, magnificently picturesque but wearisome to cross on foot, for the old iron bridge, said to be the first of its kind in England, spans the river at a high level; besides this inconvenience, a penny toll is levied on every foot passenger. So the people in the depths of the gorge keep coracles handy, if only to cross to the other side. At the present time at least eight coracles are in common use at Ironbridge, with scattered examples here and there as far south as Arley.

Most of the coracles in this neighbourhood are made by two brothers, Harry and James Rogers. Harry is a rabbit-catcher and a notable character, for has he not given a broadcast account of his activities? To him I am indebted for the details of construction which follow.

A coracle of ordinary dimensions such as that measured at Ironbridge in July, 1935, is 57 in. long by 36 in. in greatest breadth; depth to gunwale level 14 in. The two ends are similar, each well rounded. The framework consists of sawn ash laths, called "splints", $1\frac{1}{2}$ in. wide by just under $\frac{1}{4}$ in. thick. Ten form fore-and-aft frames, with nine interlaced transversely at right angles (Pl. V, fig. 2). These numbers, however, are not standardised; they vary with the height and weight of the man for whom the coracle is made. Two other coracles had, respectively, eight longitudinal and eight transverse and nine longitudinal and eight transverse.

Both the longitudinal and the transverse laths are spaced apart 4–5 in., centre to centre, producing a framework of large square meshes. Unlike the South Wales coracles the

spacing is approximately equal throughout, in accordance with the local rule of double-ended symmetry, from which the chief exception is the position of the seat. This, a deal board, 9 in. wide, is fitted athwart the frame, just abaft the mid-length transverse line, with which its *fore*-edge is coincident. Its ends rest upon the opposite gunwales, here formed of three circumferential lath bands or hoops instead of withy plaits as in the coracles heretofore described. On the under side of the seat are nailed five transverse battens which fit into five slots cut in the upper side of a wooden bar nailed across the tops of three vertical squared pillars, placed in transverse line across the bottom. These pillars are screwed from the outside to three of the bottom laths. To form a rough bulkhead three battens are nailed across the fore-side of the three supporting pillars, and above them a thin board, 5 in. broad, is added.

No complete diagonal laths are present. They are reduced to short lengths of strengthening "splints", 18–20 in. long, inserted diagonally, one at each corner. At the fore-end of the framework the lower end of each of the two corner splints is tacked to the second frame crossing from the front and from the side, whereas on the quarters each splint is tacked at the lower end to the third crossing from the end and from the side.

The cover or "hide" is of unbleached calico, coated with a mixture of pitch and tar.

According to information kindly collected by Mrs J. F. Parker, the coracles in use at Bewdley until comparatively recently were also oval in shape. Different sizes were made; those of average dimensions had six or seven longitudinal laths interlaced with ten transverse laths. The whole of the framework was usually of cloven oak, for this is the wood most easily obtainable and most commonly worked in this locality. The cover was of old sailcloth, tarred.

They were used for a variety of purposes—ferrying, angling, laying lines, and the carriage of the stone and brick sinkers required for the lines and of the large wicker traps ("putcheons") employed in eel fishing; those for the last-named purpose were of extra large size. Ordinary dimensions are said to have been 4 ft. 9 in. in length by 3 ft. 7 in. beam.

The unusual width of these coracles is explained by their use for the transport of goods and passengers rather than for fishing; as many as four people were ferried across the river on one occasion by an old man, Charles Wanklin, who died recently. The passengers stood around the paddler, clutching his shoulders and each other.

According to Mrs Parker's informants, when the coracle had to be carried, the head of the paddle loom was inserted in a socket or shoe, called a "pivot", nailed to the bottom below the front edge of the seat—an alternative to the thong loop used at Ironbridge and Shrewsbury. A carrying strap was also provided in the usual fashion.

There is evidence from Bewdley that hide covering was in use not so very long ago. Two men of the name of Tolley have informed Mrs Parker that they remember with repugnance having had to help their father to cover coracles with raw hide about 40 years ago. The hides were damaged skins thrown out from a tannery as worthless. These, though full of cuts, could be stitched up and made watertight with grease or oil; the informants think that neat's foot oil was used.

These men also state that the lath framework was strengthened with strips of green hide of $\frac{1}{2}$–$\frac{5}{8}$ in. width. These were stretched on the outside from side to side alternately with the transverse laths and were secured in position by a turn around each of the longitudinal ones. Their ends were wound round the lath gunwale and sewn down below it. When these strips became dry they both strengthened the lath framework and held its members in place as though bound with iron bands. Nowhere else have I heard of any similar practice; it appears to have been a purely local usage, possibly confined to the members of a single family.

This record of the use of hide as the cover of coracles is of especial interest as being a very late survival of an ancient practice long abandoned elsewhere in Britain. Similarly the substitution of split oak in place of ash, willow or hazel for the framework, shows how local conditions affect the details of construction.

The last Bewdley coracle was made about 1908, according

to Mr F. Fisher, a boat repairer. Wanklin, Shrimpton, Tolley, Fisher and Darkes are names of families who made and used coracles in this locality.

At Bridgnorth only one coracle fisherman, Dick Brown, continues to use this type of craft. It is of typical Ironbridge form and the paddle has the spade-shaped blade seen in Text-fig. 9*c*.

Method of construction according to Ironbridge practice

The laths or "splints" are bought ready sawn to the proper thickness; they average 8 ft. in length. Those for the frames are a fraction under $\frac{1}{4}$ in. thick, while those for the gunwale hoops are slightly over this thickness. Before use the laths are soaked with hot water to make them supple. When ready, those that are to run fore-and-aft are laid upon a wooden flooring or some sort of wooden platform such as an old door and spaced apart at regular intervals; this done, the transverse laths are interlaced and then, to keep them in place, the laths at the four corners are tacked down to the flooring or platform.

Prior to this an oval hoop formed of two half-hoops, overlapped and spliced together at the ends, has been prepared of the size and form to be taken by the gunwale. The ends of all the laths, hitherto lying prone on the flooring, are now bent upwards and tacked but not clenched to the outer side of the oval hoop, at a height of about 14 in. from the ground. After this, strings are passed in various directions across the hoop and between the upstanding ends of the bent-up laths, in order to bring them to the proper curvature. These strings prevent the laths from springing out of curve but do not hinder some of them from being pulled inwards, so it becomes necessary to run "stays" outwards from their ends to the plank floor to obviate this. These outer stays are particularly required at the corners, which are the most difficult parts of the frame to shape correctly. In this condition and under constant adjustment of the controlling strings, the framework is left for several days for the bends to become set in position. At the end of this time, an outer and permanent hooping—the so-called "skeleton hoop"—is put on; the first

or temporary one being removed thereafter (Pl. V, fig. 1). The projecting ends of the ribs are next cut off level with the top edge of the skeleton hoop. This done, the frame is set free from the tacks holding it to the flooring and turned bottom up in order that the laths may be tarred on their outer side. The framework is also ready to be covered with its "hide" of unbleached calico. As bought, this is 1 yard wide, so two widths are overlapped 3 or 4 in. and sewn together. This seam runs down the centre line of the bottom. When adjusted in position the free margins are turned over the edge of the skeleton hoop and tacked on at short intervals; any excess is trimmed away.

At this stage the bulkhead, which is to furnish the median support of the seat, is put in (Pl. V, fig. 2). This done, pitch and tar, roughly in the proportion of 1 quart of tar to 2 lb. of pitch, are boiled together and a coating of the mixture applied over the outside of the cover.

The following day the two remaining gunwale hoops are added, one on the inner side of the rib ends, the other on the outer side of the skeleton hoop but separated from it by the fabric of the cover. To do this four half-hoops are made by bending laths to the shape required. A cord adjusted between the two ends of each half-hoop keeps them in shape till set (Pl. V, fig. 2). Before, however, fitting the inner hoop, two short strengthening bars are fitted at each corner of the frame, as these places are weak owing to the frame ends diverging here rather widely. The stern half of the inner hoop is put in place first, four iron screw-clamps or "dogs" being used to hold it in position while being nailed to the skeleton hoop by 1-in. paris points. In the same way one of the outer stern hoops is put on at the after-end of the frame. Finally the forward half-hoops are put on, one within the frame ends, the other outside the calico cover. Care is taken to allow sufficient overlap at the junction of each set of half-hoops.

All that remains to be done is to fit the seat in position. This is laid athwart the coracle a little abaft the centre; its ends rest on the gunwale at each side, and each end is secured thereto by three angle ties of iron, $1\frac{1}{2}$ in. long, each screwed

in place, the outer ones with one screw through each arm, the middle one with two screws, as these screw into the bulkhead bar, whereas the others screw into the hoops of the gunwale. The seat is further secured by screws or by nails passing through it into the heads of the three bulkhead pillars.

Two slots are cut in the seat, each about 8 in. from either end, for the carrying strap of leather, and a thin leather thong-loop is put around the centre seat prop; through this loop the head of the paddle is passed on the fore-side when the coracle has to be carried, thereby relieving the pressure upon the chest. As a final touch some owners paint the outer gunwale hoop and the inner faces of the lath frames.

The cost (sale price) is given as about £2. 10*s*. 0*d*.

Paddles

Two types are in use. The older, now seldom used, is in one piece throughout. The blade is elegantly tapered from the broad distal end upwards to its junction with the loom, which is circular in section. The crutch or grip is a bluntly rounded expansion of the head of the loom (see Text-fig. 9*b*). Length 5 ft.; blade 30 in. long by 6 in. at the outer end; loom $3\frac{1}{2}$ in. in circumference; crutch 3 in. long. Locally the loom is termed the "stale", while the crutch is the "casp".

The form of paddle now in general use is in three separate pieces—crutch, loom and blade as shown in Text-fig. 9*c*. The blade is a broad piece of plank, 16 in. long by $7\frac{1}{4}$ in. wide and $\frac{1}{4}$ in. thick, parallel-sided. The cylindrical loom is continued to a distance of 10 in. on to the blade to which it is attached by two screws. Length between blade and crutch 40 in. Crutch, a straight bar, 4 in. long.

Coracle races are, I fear, events of the past. The last race at Ironbridge was some 10 years ago. Each coracle had its name painted across the bottom.

The Upper Severn Type

As already mentioned, three varieties of this type are known. One, variety A, subovate in gunwale plan and with almost vertical sides, has definite relationship to the Wye and Usk

type; the second, B, nearly oval in gunwale plan is midway between A and the Ironbridge type, while the third, C, has tumble-home sides which afford a notable increase in stability and exhibit affinity with the Dee type shortly to be described.

Variety A

This form has passed away from current use and it is at least 10 years since one was used. Fortunately two examples still exist, one in the possession of Mrs J. F. Parker, Tickenhill, Bewdley, the other at Welshpool. The latter is the more typical of the two. Its owner, Mr Samuel Phillips, the last of the Welshpool coracle fishermen, although he has not used it for years, has taken great care of it, and this is most fortunate, for it enabled me to photograph it in July 1935 and personally to obtain full details of its construction.

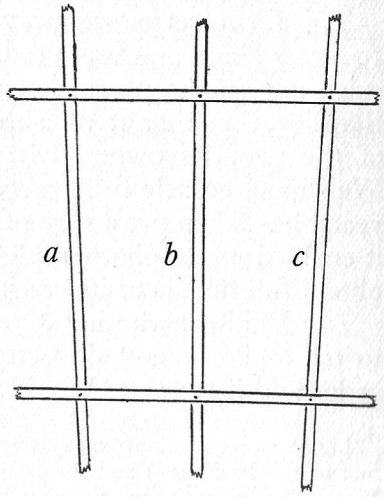
Mr Phillips, who is 78 years old,[1] had an interesting tale to tell and I cannot do better than give it in his own words as he told it to me. He said:

> I am a native of Trewern [a Severn-side township opposite Pool Quay, at the foot of the Breiddens] and my father and grandfather lived there before me. I was following the tail of the plough or fishing with my father with the coracle when I ought to have been at school. My grandfather, father and I all made and used coracles on the Severn. We used two coracles, one under each bank of the river, with a net stretched between to catch salmon. We netted the salmon in February and sold them to Shrewsbury fishmongers. Being on sale so early in the season we had no difficulty in selling all we could catch. It was very cold work out on the river at that time of the year, often in hard frost.
>
> Twenty years ago (in 1915) I came to this house (the "Boat House", Leighton Bridge, Welshpool). I heard that there was a coracle at Shrawardine Castle, above Shrewsbury, which the owner could not manage. So I bought it and brought it here. When it wore out I made one myself—this one—the way that my father taught me (Pl. II, fig. 1). The Shrawardine coracle was the same pattern.
>
> Since salmon netting was prohibited in 1890, I used my coracle for setting night lines; the licence was 10*s*. a year. But now even that is prohibited. The coracle is also useful when out shooting for retrieving ducks which fall into the water. There are two ways of setting night lines. One is to use a number of lines, each about 15 yards long and fastened to a stake in the bank. The other is to use a line about 200 yards long and to set it from a coracle zig-zag in the bed of the river. My kind of coracle has a flat gunwale; if it rose toward the fore end, it would be difficult to pull in a salmon out of the net.

[1] Mr Phillips died on April 6th, 1936.

According to this informant the method of making a coracle is as follows:

The materials required to construct the framework consist of seven ash slats (laths) 7 ft. in length and eight others of $5\frac{1}{2}$ ft. length; all must be "rent" or cleaved by hand with a hoop shaver to a width of from $1\frac{1}{8}$ to $1\frac{1}{2}$ in. by $\frac{1}{4}$ in. thick; also four more carefully fashioned slats for the gunwale. These obtained, three of the longer ones are laid down upon an old door as shown in Text-fig. 3 *a*, *b*, *c*, the outer ones at 2 ft. 7 in. apart toward one end and 2 ft. 4 in. toward the other. Two short slats are laid transversely across these, 3 ft. apart as shown, and the points of intersection secured temporarily in position by being tacked through to the door beneath. The remaining four longitudinal slats are next laid down, and then the rest of the cross slats, six in number, are laced in and out of the seven longitudinal ones at about equal distances apart. This gives an open basketry with rectangular meshes about 6 in. along each side.



Text-fig. 3. The five principal laths of a Welshpool coracle placed in position, three running fore-and-aft and two transverse and over them; they are tacked down upon the boarded floor beneath.

Having the four corner points tacked down to the door flooring below, the ends of two of the median longitudinal slats, after softening with hot water, are bent upward and nailed to the outer side of an ovate gunwale frame. A couple of the cross-slats are similarly treated. With these guide frames in position the rest are easily worked into their respective places.

The inner gunwale band referred to is made up of two lengths of wide ash slats about $1\frac{3}{4}$ in. wide, each bent into an oval form and joined to its fellow by an overlapped joint. The two oval bands differ markedly in radial curve.

To stiffen each of the four corners of the frame, a short length of slat is placed diagonally between the gunwale and the second slat crossing from front and side; each is 23 in. long. Other strengthening pieces are four accessory "foot" battens, each 3 ft. long, placed alternately with the first five transverse frames and nailed over them. When all the framing is in position, the seat is put in. This is a board 8 in. wide, 2 ft. 10 in. long at the fore-side and 2 ft. 8 in. along the after-side. Each end rests upon the edge of the gunwale band and is screwed to a short batten nailed against its inner face at the place where the ends of the two sections overlap. To hold the bottom stiff, the seat is supported at one-third its length from each end by a stout cylindrical rod about 16 in. in length; its lower end rests upon one of the bottom slats.

At this stage the frame is set free from the holding down nails and is turned bottom up, to have its cover of stout calico put on. This done a coat of pitch and tar is applied both to the inner and outer surfaces. Last of all an outer gunwale slat band is nailed to the outer side of the frame ends which are thus enclosed between an outer and an inner gunwale band.

The *paddle* is of ash. Length 4 ft. 3 in. overall; the blade is 18 in. long, including the sloping shoulders which are 6 in. in length and which merge gradually from blade to loom; the blade has parallel sides, is $4\frac{1}{2}$ in. wide and has one side flat, the other convex transversely (Text-fig. 9*f*). This convex side presses against the water when the paddle is in use. The stroke used in the usual figure-of-eight one, used either with one hand at the side of the coracle or with both hands over the fore-end. No crutch at the upper end of the loom. A wooden club termed "priest", 9 or 10 in. in length, is hung just below the gunwale in two loops of leather, alongside the seat on the left.

The manner of carrying this coracle differs from that employed in South Wales. No carrying strap is used. The coracle is lifted by both hands with the bottom upwards; thus inverted the flat of the seat is brought to rest on the left shoulder, then the paddle is placed across the right shoulder with the blade inserted under the seat in order to take part of the weight. The net, in the days when this was used, was carried on the

top of the inverted bottom. Mr Phillips explained that the reason for not carrying the coracle on the back by means of a strap loop is that in this position "the wind is liable to fill the coracle and blow you off your feet". As we shall see later this horizontal way of carrying coracles is limited to the Upper Severn *above* Shrewsbury and to the *upper* reaches of the Dee.

Dimensions, etc. The length overall is 4 ft. 10½ in.; of this the open space forward of the seat measures 2 ft. 4 in., that abaft the seat 1 ft. 10½ in. Width outside, at 18 in. from the fore-end, 3 ft.; at 16 in. from the after-end 2 ft. 8 in. Curve radius of fore-end 18 in.; of after-end 16 in. Depth at 1 ft. from the front 16 in.; at 1 ft. from the after-end 13½ in. The short length of the "tail" is notable. The pitch mixture is made of 2 lb. pitch to 1 lb. of tar. The nails preferred were flat-headed "clog nails", as these are soft enough to be clinched easily, but they are not easily obtainable.

Since my visit to Welshpool, Mr A. Stanley Davies has made further enquiries with the result that several old men testify to the fact that William Evans, of Haimwood, Llandrinio, the last coracle fisherman on the reach below Criggion and on the last reach of the river Vyrnwy before it joins the Severn, made the framework of his coracles of strong briars pulled from the hedgerows. Coracle fishermen were poor and would not buy material if a substitute could be obtained free; it is probable that this information is correct, for briars grow rank and strong in a wild country where they are not disturbed for years.

Like Phillips, William Evans was engaged in salmon netting until 1890, when the practice became illegal.

The old Shrewsbury coracle (A) belonging to Mrs J. F. Parker, Bewdley, is on the same general pattern as the Welshpool one (B). Both agree, in contrast with modern Shrewsbury practice, in having all the laths interlaced, but differ between themselves in certain peculiarities. The chief of these are:

(*a*) the diagonal laths are complete in A, whereas they are reduced to short corner splints in B;

(*b*) no accessory "foot-splints" strengthen the bottom in A, as against four in B;

(*c*) a carrying strap is present in A, absent in B, though the presence of two holes in the seat of B suggests that a carrying rope was used originally before the practice of carrying the coracle supported by the hands was adopted.

(A) also differs in the bluntness of the short after-region.

This old Shrewsbury coracle has considerable affinity to the Wye coracle now in Hereford Museum, and it seems probable that the same type of coracle was originally in use throughout the Usk, Wye and Severn region wherever salmon *netting* was practised, whereas a round or oval type was used on the Severn when required for other purposes.

Varieties B and C

"When George the Third visited Worcester about the end of last century [i.e. the eighteenth century], an old fisherman named Peplow, living in Shrewsbury, felt a great wish to see his Majesty. Accordingly he made a voyage down the Severn in his coracle, being at the time more than 80 years old. The King graciously received the venerable Salopian, who returned to his native place, full of joy, and lived to the age of 97."[1]

Shrewsbury men continue the coracle tradition and, indeed, it is here only that coracles are now to be found on the Upper Severn. Even so, none is in regular use, the only coracle owners being working men anglers who employ them partly for the enjoyment of the pastime and partly for the modest profit obtained if they have luck. Sometimes quite long journeys are taken; I know of two men who once took their coracles by rail to Buttington, near Welshpool, and made a leisurely four-days' return down-stream from Old Quay, fishing by day and camping by night. The railway, I may say, class coracles as bicycles in their tariff, presumably because they are one-man vehicles!

Two distinct varieties of coracle are in use—B and C. The one I call B is the older, but both are characterised by departure from the original method of interlacing the laths forming the framework. The transverse laths are here laid over the longitudinal ones to which they are attached by rivets or clinched nails at the crossing places.

Many of the coracle men live in Frankwell, an old district on the farther side of the Welsh Bridge; others live in the

1 *Salopian Shreds and Patches*, 1, 145, 1874–5.

working class quarter within the city proper. On Sundays and holidays, if a stranger rises early and goes down to the riverside, the chances are that he will see a number of men wending their way on foot along the road northwards, each with a coracle on his back, slung by a strap or rope across his chest. They usually trudge as far as Shelton Rough, about 4 miles out; here they launch their coracles and spend the rest of the day in restful pursuit of the Gentle Art, the while they drift in easy stages down the river.

Variety B

This is the commoner form in use. It is evidently kindred to the Welshpool variety, but tends to be more oval in plan and considerably shorter. There is, however, considerable range in the proportions and in size, for each is made to the individual taste and needs of the owner. The fore-end is slightly deeper and wider than the stern; both ends are well curved on the gunwale and there is no sheer. A characteristic and novel feature is that in many the bottom curves up to the fore-gunwale more gently than at the "tail", thus reversing the general practice elsewhere, where the steep, blunt end is forward—a shape suitable for hauling nets but not for rapid progress.

These coracles are usually made as light as possible. One belonging to Mr David Craddock, a one-legged devotee of Izaak Walton, is typical though smaller than some (Pl. IV, fig. 2). It measures 3 ft. 10 in. in length overall, with an extreme width amidships of 3 ft. The seat, 11 in. wide and $\frac{3}{4}$ in. thick, is placed almost flush with the gunwale, its ends resting upon cleats nailed against the inner side of the gunwale and supported below by a row of three stout squared pillars. The fore-edge is 20 in. from the bow, the after-edge 15 in. from the stern. Depth to the underside of the seat 11 in.; height of the coracle at the bow 14 in.; at the stern 12$\frac{1}{2}$ in. The radial curve of the gunwale is similar at both ends—19 in. The weight is 18 lb., but one of 12 lb. has been used. The lightness and equal-ended curve are suggestive of relationship with the Ironbridge type.

The frames in this coracle are reduced to five longitudinal and seven transverse; in another slightly larger, the numbers

were seven and eight respectively. They are made from sawn laths, locally known as "splints", 1$\frac{1}{2}$ in. wide by $\frac{1}{4}$ in. thick. As the saw-cut does not always coincide with the grain of the wood, these sawn laths are not interlaced for fear of cracking, so the two sets, longitudinal and transverse, are riveted together at the intersections. In addition five straight "foot splints" are nailed on alternately with the foremost transverse frames. A short diagonal is placed at each corner as in the Ironbridge and Welshpool designs.

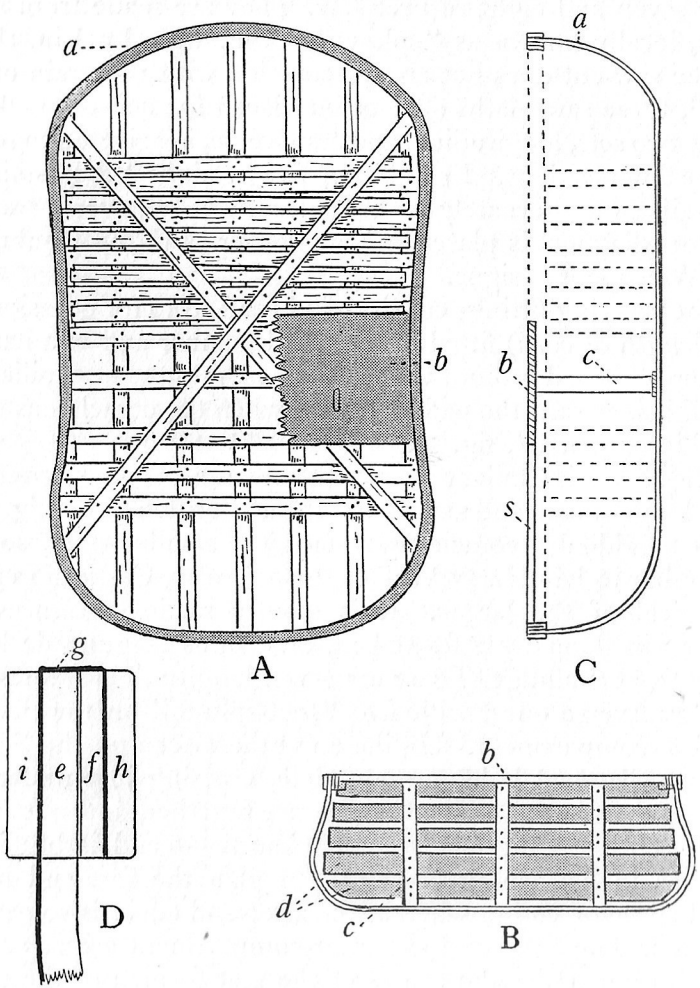
The carrying fittings consist of a broad strap (or occasionally of a length of cord) fitted in the usual manner and of a narrow leather loop tied around the central of the three seat pillars—into this is passed the paddle crutch when the coracle has to be shouldered (Pl. IV, fig. 2).

The paddle is similar to that of the Wye and Usk except that it has a longer blade and a cross-bar form of crutch (Text-fig. 9 *d*).

As Craddock's coracle represents the smaller sizes, so one belonging to Mr Harry Walker, Fish Dealer, Castle Foregate, is typical of the larger. It is stoutly made and measures 4 ft. 10 in. long by 2 ft. 10$\frac{1}{2}$ in. amidships at gunwale level, and 3 ft. at the bilge. There are seven longitudinal frames and nine transverse ones, with five "foot-splints" on the floor of the fore-compartment. Unlike any others seen on the Severn the two diagonal laths are complete, crossing just under the front of the seat. All laths are riveted together, and not interlaced. Unlike Craddock's coracle the front end is bluff and steep as in net-fishing coracles. In plan the fore-end has a radial curve of 18 in., whereas the after-end curve is somewhat flattened. The fore- and the after-compartment are separated by a grating under the centre of the seat formed of three uprights crossed by five battens. For details see Text-fig. 4.

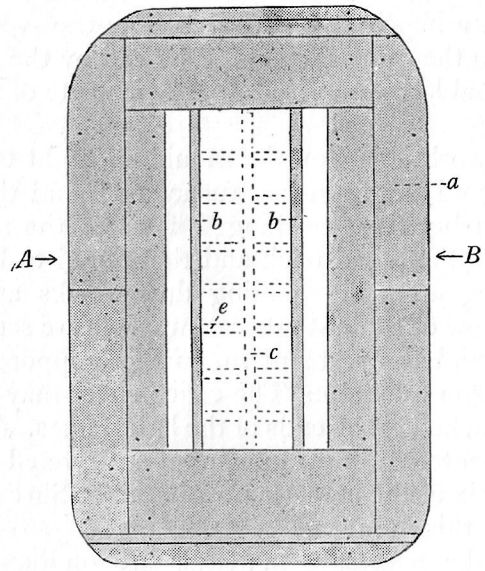
Variety C

This is a comparatively modern modification devised about 60 years ago by the late Mr H. Hudson, a Shrewsbury boat-builder. It is characterised by the strong tumble-home of the sides due to the prominence of the bilge curve into which the bottom expands. This curious shape is obtained by the use of

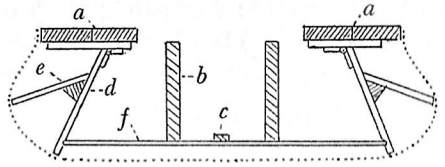


Text-fig. 4. The Shrewsbury type of coracle. A. Plan, with the seat partially cut away to show the whole arrangement of the lath framework. B. Transverse section at the place where the seat is supported by three pillars. C. Longitudinal section along the median line; the positions of the gunwale and the transverse frames are indicated by broken lines. D. An enlarged transverse section through the gunwale. *a*, the fore-end; *b*, seat; *c*, supporting seat pillars; *d*, battens nailed across (*c*) to form a partition; *e*, end of one of the ribs; *f*, first gunwale hoop; *g*, edge of the canvas cover reflected over (*e*) and (*f*); *h* and *i*, second and third gunwale hoops, keeping (*g*) in position; *s*, median strut between seat and stern.

an elaborate wooden mould around which the framework is built. Pl. V, fig. 3, shows its general construction viewed from the lower side, while Text-fig. 5 gives a face view of the upper



Text-fig. 5. Face view of the Shrewsbury coracle mould. *a*, the wooden decking; *b*, *b*, two boards set on edge beneath the decking; *c* and *e*, web of struts at a lower level (cf. Pl. V, fig. 3).



Text-fig. 6. Transverse section of the Shrewbury coracle mould along the line *A–B* in Text-fig. 5. *a*, *b* and *c*, as before; *d*, the hinged longitudinal flap with its flange (*e*), extended by the spreader *f* to form the bilge curve of the coracle frame along each side. The dotted outer line represents the position of a transverse lath bent into shape.

side and Text-fig. 6 a transverse section when in use. As will be seen, along each long side is a hinged portion; the two when reflected to their full extent (Text-fig. 6 *d*) are kept in this position by the insertion of two bars or spreaders (*f*) between them.

Thereafter it is comparatively easy to build up the framework of the coracle around the mould with laths which have been rendered supple by soaking in warm water. A gunwale hoop is first tacked on round the edge of the mould which lies face downward on a bench or on trestles. The transverse laths are then tacked to the gunwale band, followed by the fitting on of the longitudinal laths, a procedure the opposite of the ordinary method.

The framework is left on the mould all night to set. When ready, the mould and frame are turned over and the spreaders removed from between the hinged sides of the mould. This allows them to be folded back and the mould to be lifted out of the framing after the holding down tacks are loosened. Thereafter a row of three stout seat supports are screwed to the bottom laths and the seat put in, further supported by cleats nailed to the gunwale hoop. The calico cover may now be put on, its edges tacked to the ends of the lath frames. After tarring the cover, an outer and an inner hoop are riveted to the gunwale. About six of the coracles now in use at Shrewsbury have been made on this mould.

When all the necessary materials are on hand a coracle framework requires about 4 hours to make on this mould, and it can be ready for the water within 3 days. The sale price of a coracle made in this fashion is from 50*s*. to 55*s*.

Dimensions of the mould: Length 4 ft. 3 in. Width open 3 ft. 3 in.; closed 2 ft. 3 in. Depth 11½ in.

NORTH WALES

The years are few that separate the present from the time when coracles were in common use on all the important rivers in North Wales. We have already noted how the "leather bag" cradling the babe Taliesin was stranded on a weir between Aberystwyth and the Dovey. In more recent days we find that the Rev. W. Bingley[1] in 1798 saw on the river Dovey "two of the boats called coracles; these", he says, "are used chiefly

1 *A Tour round North Wales performed during the summer of* 1798, 1, 470, London, 1800.

in fishing; they are 5 or 6 ft. long, and 3 or 4 broad, of an oval shape and so light that one man may with ease carry them on his shoulders". He notes that whereas in Camden's time (*c*. 1580) they were covered with horse-hide, "they are now usually covered with pitched canvas. They hold only a single person, who can row himself with incredible swiftness [!] with a paddle in his right hand whilst with the other he can manage a net." This quotation, though standing alone, suffices to prove that coracles were used for salmon netting on this river in spite of present-day disuse.

Of old references to coracles on the River Conway none is to be found and all we have to rely upon are the statements of local people that home-made ones were formerly in use. At the present time a few are still to be met with, but all these have been imported, two at least from Llechryd on the Teifi.

There remains the Dee, most important of all North Wales rivers. Here, until 1920, coracles were numerous all the way from Bala to Overton and Bangor Is-y-coed, near Wrexham. In the upper region they were, and continue to be, used for angling, whereas at Overton and Bangor they were employed in the netting of salmon. As elsewhere they were covered, of old, with hide, but even so far back as 1810 we find Pennant[1] recording of the Dee coracles that they were much used for salmon fishing and were no longer covered with hide, "but with strong pitched canvas. They hold only a single person, who uses a paddle with great dexterity."

Until 1920, when the net fishermen of Bangor were bought out, two distinct types of coracle existed, (*a*) the Lower Dee type, and (*b*) the Upper Dee type. These we shall consider separately.

The Lower Dee type

This was the one formerly used at Bangor Is-y-coed and Overton. At the beginning of this century there were about a score of men engaged in this fishery, each man owning a coracle. The method of netting was identical with that practised in South Wales, but the nets were heavier.

1 *Tours in Wales*, 1, 303, London, 1810.

In 1920, three nets worked by three pairs of coracles were bought out by the Dee Fishery Board, by the payment to the six coracle men of the sum of £1000, raised by subscription from riparian landowners. For some years previously the Board had refused to issue fresh licences when any lapsed by death, so the six Bangor men were the last stumbling-block to a clear river so far as netting was concerned.

No one has ever described the type of coracle used in this locality, and I was fearful lest details might be unobtainable. Fortunately one of the men, Mr Harry Stant, was so attached to his coracle that he built a small shed in his garden at Bangor to house the relic, and here I found it when I visited the village in the summer of 1935.[1] The owner kindly allowed me to photograph it and supplied me with details of construction. As will be seen from the figures on Pl. III, it is of type distinct from any so far described. It incorporates several novel features; of these the principal are the use of a greatly increased number of narrow transverse laths, the absence of any trace of diagonal laths, the presence of a stout median strut between the seat and the stern gunwale, and the great bulge of the tumble-home sides; the last-mentioned has, however, been noticed in the aberrant Shrewsbury coracle made upon a hinged mould.

The shape in plan at gunwale level is that of an ellipse slightly pinched in, waist-like, on the sides. The fore-end is regularly curved; the stern curve distinctly flattened. As will be seen from the figures, the prominence of the deep bilge on either side gives a beam nearly 9 in. greater close to the bottom than on the gunwale.

The *framework* is formed of interlaced ash laths, locally called "splints". These are exceptionally slender, so, to compensate for this, the transverse laths are greatly increased in number and the majority are arranged in compound sets, each set corresponding to one of the broad transverse laths seen in South Wales coracles. There are nine longitudinal laths or frames, set 4 or 5 in. apart; in the fore-compartment, forward of the seat, each of the five central ones is strengthened by a pair

1 This coracle was eventually secured for the National Museum of Wales, Cardiff, where it is now on exhibition.

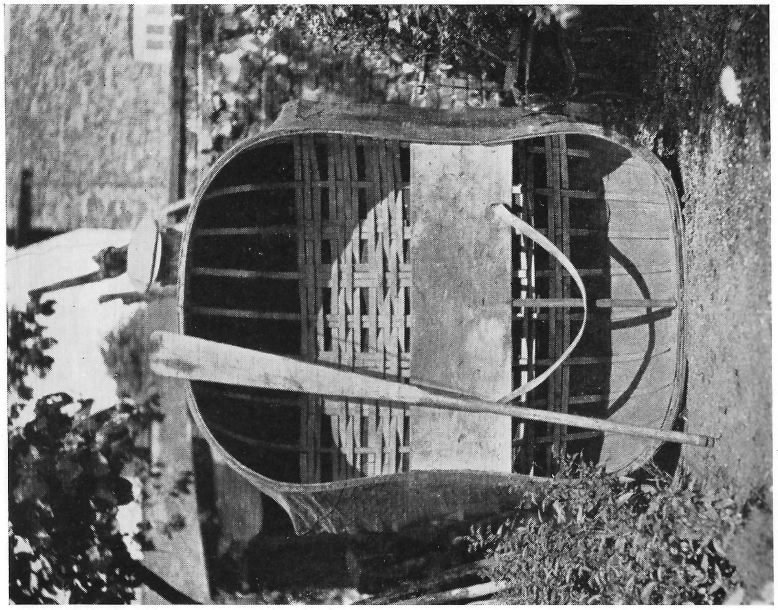


FIG. 2. FACE VIEW OF THE SAME CORACLE
Now in the National Museum of Wales.
Photos by J. Hornell, 1935

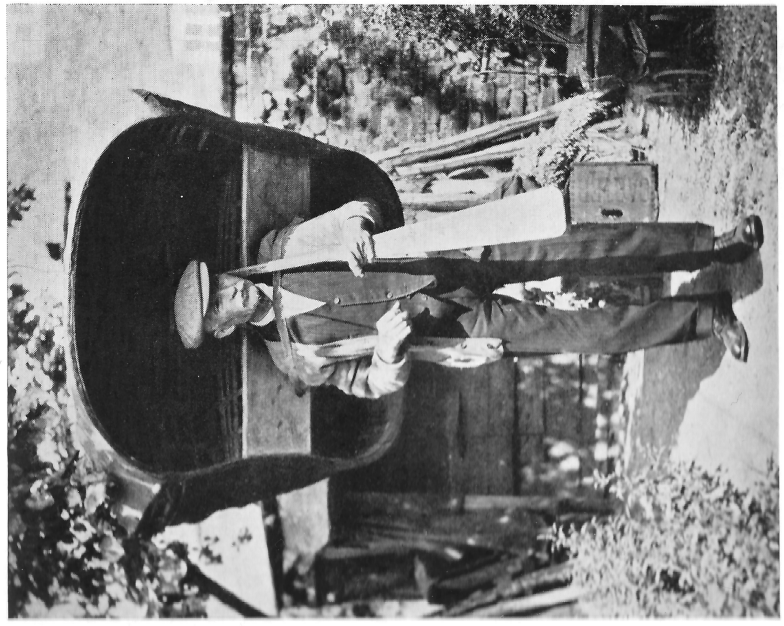


FIG. 1. THE LAST OF THE BANGOR-ON-DEE CORACLE FISHERMEN (MR W. STANT) CARRYING HIS CORACLE

The two sets of laths which are to form the framework are arranged as usual on the ground or preferably on a wooden flooring where they are kept in relative position after interlacing by weights or by tacking down.

The ends of the transverse laths on one side are then bent up and locked between two stiff rods running longitudinally, each lath end being tied to these two embracing rods. The lath ends on the opposite side are similarly treated; this done, the ends of the two opposed pairs of rods are connected by cords at the distance apart which is to be the eventual width of the coracle at gunwale level. The ends of the longitudinal laths are similarly treated and held in place by cords running fore and aft. The result is that the framework appears of the form of a rectangular basketwork trough with the four sides not joined together at the corners.

To facilitate bending, the laths are sometimes thinned slightly at the bends.

When the curved laths are considered to be sufficiently set, the latticework seat-partition is placed in position and wired at several points along the bottom edge to the laths below. This done the two lower gunwale hoops are nailed in position, one outer and the other inner to the laths and about an inch and a half below what will be the eventual gunwale edge. The ends of the laths embraced by the paired rods are now released and the seat may be put in, its ends passing over and beyond the lower gunwale hooping. The ends of three of the transverse laths are passed through slots in each end, a procedure which causes the waist-like appearance when the coracle is completed. The seat is further secured by being wired at intervals through paired holes to the upper edge of the partition below.

The upper gunwale hoops are next added, one on each side of the projecting frame ends, which are now cut off flush. These upper hoops pass over the seat ends.

The coracle is now ready to be covered with calico. The edges are reflected over the gunwale and tacked on. After receiving a coating of the usual pitch and tar mixture, an extra edge of the cover.

Dimensions

Length overall 4 ft. 7 in. Greatest beam of fore-compartment at gunwale level 3 ft. 2 in.; at bilge 3 ft. 11 in.; at seat, inside, 35 in.; length of seat 38 in., width 11 in., thickness $\frac{1}{2}$ in. Depth to top of gunwale 14 in. Laths of ash $\frac{3}{4}$ in. wide by $\frac{1}{8}$ in. thick. Weight of coracle 25 lb. when new.

The Upper Dee type

The range of this kind of coracle extends from Bala to some distance below the mouth of the River Ceiriog, with its centre at Llangollen. In its most extreme form it appears far removed from the Lower Dee type, but analysis of the various features and comparison of the variations existing or recently become obsolete render it easy to trace a direct line of descent.

Most of these coracles are made to accommodate two persons. To give the increase of flotation requisite for this purpose and to render them more stable, the bilge is accentuated so greatly that in bottom view they appear almost square; a typical example measures 4 ft. $9\frac{1}{2}$ in. in length by 4 ft. 7 in. width on the bottom. For greater safety in shooting rapids, the ends are considerably sheered, and are from 4 to $4\frac{1}{2}$ in. higher than amidships.

The framework of a typical coracle belonging to Mr Isaac Roberts, one of the oldest fishermen in Llangollen (Pl. II, fig. 2), may best be described by comparsion with the Bangor coracle figured in Pl. III. The chief differences to be noted in the Llangollen coracle are:

(*a*) The use of broader laths (planed ash); nine run fore-and-aft and sixteen crosswise—nine forward of the seat, three under it and four abaft it.

(*b*) The presence of a short diagonal lath at each corner.

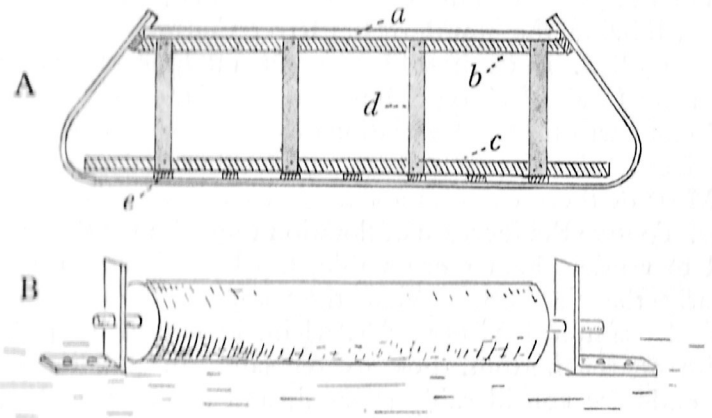
(*c*) Two rows of pillars support the seat, one under the fore-edge, the other under the after-edge. Each row consists of seven stout, squared pillars with the ends recessed into a lower and upper transverse bar.

(*d*) The emphatic sheer given to each end.

(*e*) The lateral gunwales show no appreciable pinching in amidships; the two end ones are nearly straight except at the corners, thereby giving to the gunwale view a square, box-like appearance.

(*f*) No carrying strap present; the customary way of carrying is to support the seat across the shoulders, steadying the coracle with the hands gripping the sides close to the fore-end (Pl. IV, fig. 1).

(*g*) The paddle is short, barely 4 ft. in length. The blade 22 in. long, is nearly parallel-sided, being $4\frac{1}{2}$ in. wide under the

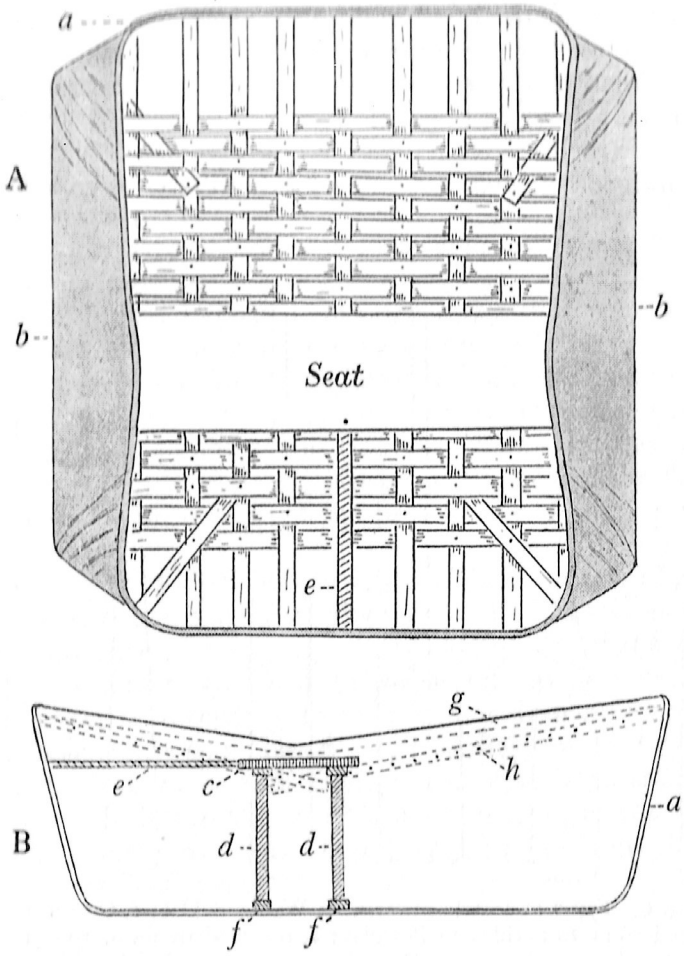


Text-fig. 7. A. Transverse section through Isaac Roberts' two-seater coracle, Llangollen. *a*, seat; *b*, upper transverse bar of the seat support; *c*, lower transverse bar of same; *d*, seat pillar; *e*, longitudinal lath frame. B. Roller used as a mould for the lateral bilge curve of the coracle framework.

shoulders and 5 in. at the outer end. The loom is cylindrical and without crutch.

The method of carrying, supported by the hands over the head, is a comparatively recent innovation. Old photographs show the coracle being carried in the orthodox manner by a leather strap across the breast and shoulders, with the paddle resting horizontally on the left shoulder with its loom end inserted within the interior of the coracle. In these old photographs, the fishermen carry a rod in the right hand.

Mr E. S. Lloyd-Jones, a keen angler and proprietor of the

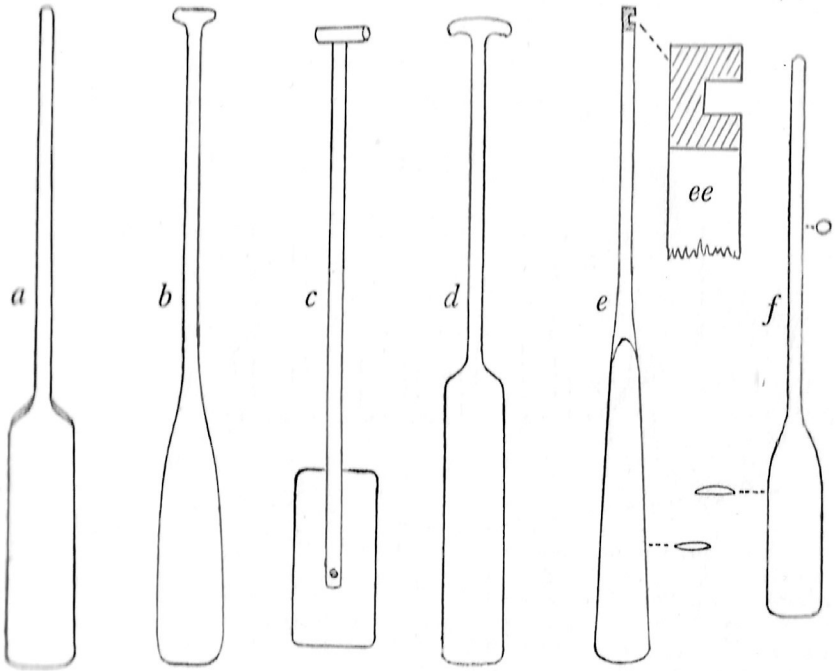


Text-fig. 8. Aluminium-framed type of two-seater coracle, Llangollen. A. Plan. B. Longitudinal median section. *a*, fore-end; *b*, lateral bilge; *c*, seat; *d*, *d*, anterior and posterior seat pillars; *e*, median strut between seat and stern gunwale; *f*, *f*, two transverse frames; *g*, gunwale hoop; *h*, strengthening hoop below gunwale riveted to the ribs and inclined so as to meet its fellow below the seat.

Flannel Mills outside Llangollen, some years ago introduced a coracle designed to be lighter, stronger and more lasting than the old type, by substituting an aluminium framework for one of ash laths. Text-fig. 8 shows one of these modern coracles.

Apart from the use of aluminium in place of wood, the design adheres closely to traditional lines. The cost is considerably greater than that of the old, being about £15 as against about £5 for an ash-framed one.

Great are the advantages for angling on a rocky, shallow river of a coracle over any other kind of craft. A coracle draws



Text-fig. 9. Types of coracle paddles. *a*, Wye and Usk; *b*, the form formerly used from Ironbridge to Bewdley; *c*, the modern form, same region; *d*, Shrewsbury; *e*, Bangor-on-Dee with *ee*, an enlarged view of the upper end of the loom shod with a notched iron band for use when carrying the coracle; *f*, Welshpool.

so little water—between 2 and 3 in. only—that it can go almost anywhere; the paddler, using one hand only, can turn and twist it at will and shoot rapids and thread narrow channels in a way quite impossible in a canoe. When need be he may slip behind a boulder or a jutting rock, or hold on with paddle, gaff or foot and so fish places out of reach of the angler in waders or in any other craft but a coracle. In his basket boat the angler

can snuggle in safety against a rocky ledge in a back eddy with foaming white water on one side or perhaps on both. Hence the continued popularity of the coracle on the Dee where most of the riparian owners fish regularly in coracles.

Besides these, there are two old coracles on the Rhiwlas estate, Bala, reputed to be the oldest in the district. One, if not both, was made about 46 years ago by Mr Guest, a cooper by trade. They are said to have been used for pike netting on Bala Lake as well as for angling on the Dee. They resemble closely the Bangor Is-y-coed type except that both possess short diagonal corner laths and are without the wide bilge common to the Llangollen and Bangor designs. I am inclined to think that originally when netting was common wherever possible along the whole course of the Dee, the type in use was that of the Bala coracle more nearly related of the two to the Bangor type: if so the wide bilge of the present day would be a later modification.

What suggests that this particular Bala coracle is of a very old type is its great weight, given as 86 lb. This is so much heavier than any other of which I have knowledge that I should doubt its accuracy were it not for the story of how the cover was prepared. According to this, before drawing the cover over the frame, it was dipped into a boiling mixture of pitch and tar by four men, each holding a corner. This account is identical with that given by a Carmarthen man of the way in which a flannel cover was treated, so I suspect that this old coracle cover is of flannel.

Construction

The method of constructing both the wooden- and the aluminium-framed coracles is practically identical. The following is that of a wood-framed one.

After the two sets of laths have been interlaced in the usual manner on a plank flooring, a wooden roller about 3 ft. long by about 6 in. diameter, having an iron pin running through it, is placed lengthwise over the laths on each side, and secured to the floor by iron brackets in the way shown in Text-fig. 7 B. The two rollers are arranged at a distance apart of about what

the eventual gunwale beam is to be. Discarded rollers from an old mangle are suitable for this purpose.

The projecting parts of the transverse laths, after a preliminary soaking with warm water, are bent up and tacked against the upper part of the rollers on the outer aspect, their ends sloping inwards to form the tumble-home type of side characteristic of this design. After being left for some time to set the bends, the projecting ends, at the proper level, are nailed between a pair of lower gunwale hoops, each composed of two half-hoops, in the Bangor manner, but instead of being arranged horizontally, the half-hoops are fixed with such a sheer towards the ends of the framework that their ends cross one another obliquely amidships. The two rollers are now removed and the seat with its two sets of pillar supports are put in and secured in place (Text-fig. 7 A); this permits of the nailing on of the upper circumferential hoops to form the gunwale proper. A cover of sailcloth is stretched over the frame; an overlap at each corner strengthens what are the weakest places. The aluminium-framed coracle is made in the same way except that at each intersection of the laths in the framework, the two strips are riveted together and that the aluminium laths do not require to be tacked to the bilge-forming rollers.

Dimensions

The dimensions of the ash- and the aluminium-framed coracles agree very closely. They are as follow:

	Ash-framed		Aluminium-framed	
	Ft.	In.	Ft.	In.
Length overall	4	9	4	9½
Length from fore-end to seat	2	3	2	4
Length from seat to stern	1	7	1	7
Width of seat	0	11	0	10½
Length of seat	3	3½	3	3½
Beam at gunwale amidships	3	2	3	2
Beam at bilge, outside	4	5	4	7
Greatest beam of the fore-compartment at gunwale	3	3	3	5
Depth to top of seat	1	2	1	2
Height at each end	1	8	1	7½
Height amidships	1	5	1	5
Weight	About 50 lb.		Between 40 and 50 lb.	

FIG. 1. AN IRONBRIDGE CORACLE IN FRAME AND BEING CARRIED

By courtesy of Mrs J. F. Parker

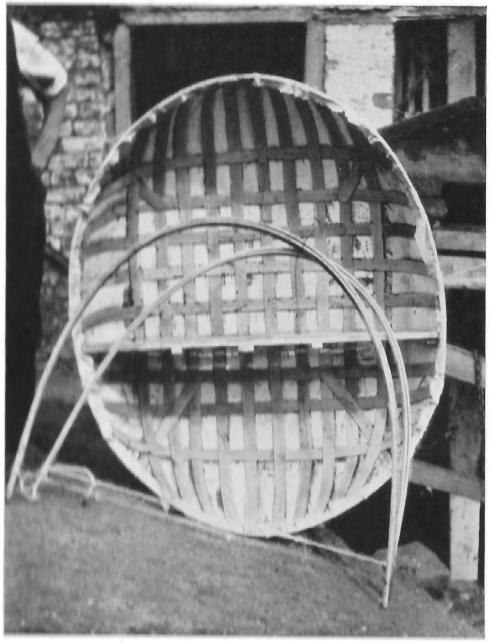


FIG. 2. AN IRONBRIDGE CORACLE IN THE MAKING

Two double laths are being bent to form the gunwale hoops.

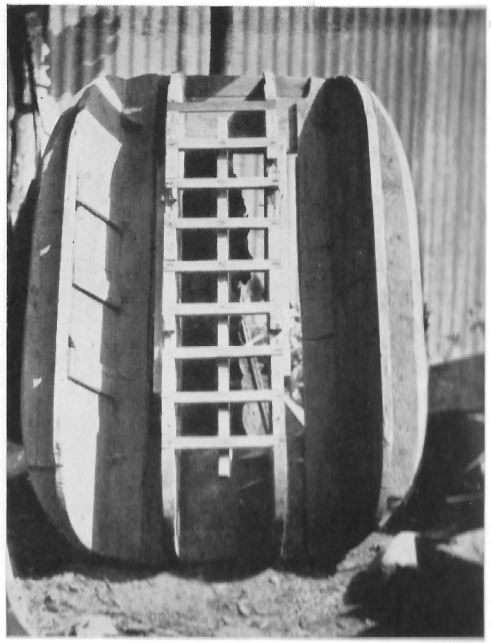


FIG. 3. WOODEN MOULD FOR CORACLE FRAMING, SHREWSBURY

Figs. 2 and 3 from photos by J. Hornell, 1935

The aluminium laths are $1\frac{1}{2}$ in. wide by $\frac{1}{16}$ in. thick. The stability of these coracles is such that a man may sit almost on the gunwale without causing a capsize.

SCOTLAND

Notices of the use of coracles in Scotland are of the scantiest, but what there are possess vivid human interest. If we omit reference to the adventurous voyages in hide-covered boats performed by St Columba and St Cormac, which belong to the story of the curragh rather than the coracle, the earliest record is a racy account by Hector Boece, who wrote in 1527 a Latin History of Scotland. As translated by John Bellenden,[1] Boece, after mentioning that the people of Scotland had generally adopted the language of the Saxons, continued:

> Howbeit, the Hieland hes baith the writingis and langage as they had afore, mair ingenius than ony othir pepill. How may thair be ane greter ingine, than to make ane bait [boat] of ane bull hid, bound with na thing bot wandis? This bait is callit ane currok; with the quhilk thay fische salmond, and sum time passis ouir gret rivers thairwith; and, quhen thay have done thair fisching, thay beir it to ony place, on thair bak, quhare thay pleis.

From this quaint but essentially accurate account of a coracle we pass to stories of fairies and second sight.

For generations the "Fairy Flag" of the MacLeods was their most treasured possession—a small square of very rich cream-coloured silk, spangled with crosses wrought in gold thread. Various are the tales of its fairy origin that cling to the decaying relic, but these do not concern us here. What is, however, of moment is an ancient legend found in "The Prophecies of the Brahan Seer" as set forth by Alex. Mackenzie.[2] This seer, by name Kenneth Mackenzie, but better known as Coinneach Odhar, was born in the island of Lewis at the beginning of the seventeenth century. His fame as the possessor of that mysterious power called second sight is pre-eminent in the Highlands, and many are the prophecies he made that are alleged to have come true. The particular prophecy to interest us here is that concerning the fortunes of

1 *The Bounds of Albioun*, 1536. 2 Stirling, 1899.

the MacLeod chieftains whose ancestral seat is Dunvegan Castle in Skye. It runs as follows:

When Norman, the fourth Norman, the son of the slender, bony English lady, should perish by an accidental death; when MacLeod's Maidens [dark rocks on the coast] should become the property of a Campbell; when a fox should have young ones in one of the turrets of the castle; and when the Fairy Flag should for the last time be taken out of its box and unfurled, then the glory of the MacLeods would depart, a great part of their lands would be sold, and a *curach*, or coracle, would be sufficient to carry all the gentlemen tacksmen of the name of MacLeod on the estate across Loch an Duin.[1]

Seton Gordon tells us (*loc. cit.*) that the third unfurling came about in 1799 when the box in which the flag lay was opened by persons without the knowledge of the chief. Since then all the mischances prophesied have been fulfilled, and to-day there is not a single MacLeod tacksman left, though "at the time the prophecy was made (about two hundred years before its fulfilment) there were more than two score of tacksmen of the name of MacLeod on the estate".

Another coracle story belongs to the fateful time of the 1745 rebellion. The scene is set in the island of Benbecula in the Outer Hebrides, the home of ClanRanald of the Isles. The traditional tale is told by Mr Alasdair Alpin MacGregor.[2]

According to this, one of the chief's henchmen when returning home found an old woman at the stepping stones of a ford, rinsing a cloth and wailing a dirge. When pressed for the reason, she replied, "I am washing the shroud and crooning the dirge for Great ClanRanald of the Isles, and he shall never again in his living life of the world go thither nor come hither across the clachan of Dun Borve." The henchman threw the death shroud into the loch and told the story of the incident to his master on reaching home.

ClanRanald immediately directed that a cow be killed for her hide, and a new coracle made with all haste. Before long the coracle was brought to him. And ClanRanald of the Isles speedily forsook Dun Borve, carrying the coracle; and he sailed out over the loch for the last time.

1 Seton Gordon, *The Charm of Skye*, London, 1931, pp. 137–8.

2 *Searching the Hebrides with a Camera*, London, 1933, pp. 34–5. Mr MacGregor informs me that the tradition as given was told to him by his father, an authority on all matters Gaelic.

I find that ClanRanald was made prisoner in 1746 for aid given to Prince Charlie during his wanderings after Culloden. So this incident brings down the use of hide-covered coracles in the Hebrides to the middle of the eighteenth century.

Parting with reluctance from fairies and spaewives for the prosaic facts of the mainland, we find that coracles of wickerwork covered with hide, were in use on the River Spey in Morayshire until, at least, the end of the eighteenth century. J. Anderson[1] states so definitely, and adds that Sir John Dick Lauder says that the York Buildings Company had fourteen of them employed in towing rafts of timber down the river. He also records the fact that the Rev. Mr Grant who wrote the *First Statistical Account of Abernethy*, mentions that "There is one of them now (1794) in Cromdale". The Rev. Lachlan Shaw,[2] writing in 1775, describes them as in shape oval, 4 ft. long and nearly 3 broad, a small keel from head to stern, a few ribs across the keel, and a ring of pliable wood around the lip of it, the whole covered with a rough hide of an ox or horse. The coracle man sat on a transverse seat in the middle; if a passenger were taken, he stood behind the paddler, leaning on his shoulders. They were become a "rarity" in 1775.

I am at a loss to understand the reference to a keel, and I believe the writer to be in error, for, most fortunately, the battered remains of the last Spey coracle reposes on a wall of the Elgin Museum. This has a shallow, bowl-shaped framework, oval in plan. It appears to have been wrought throughout of closely woven wickerwork, although almost the whole of the bottom is broken away. The exterior is covered with strong bull hide, its edges reflected over the stout cylindrical gunwale (see Pl. I, fig. 2). Its size is 5 ft. long by about 4½ ft. beam. A wooden seat is the full width of the coracle and 11 in. broad. Apart from two holes in each end through which passed cords or thongs tying it in position, three round holes are present. Through two probably passed the ends of a carrying rope or thong—not a strap, as the holes are not slots. The significance of the third is not clear.

1 *Scotland in Early Christian Times*, 1881, pp. 141–2.

2 *The History of the Province of Moray*, Edinburgh, 1775, p. 164.

As will be seen from an examination of the photograph, the technique of the framework is different from that of any existing Welsh or English coracle; it diverges equally from that of the Irish or Boyne type and approaches rather that of the *guffa* of Iraq. Instead of being composed of two series of widely separated laths or pliant rods interlaced at right angles, the frame here is of true wicker basketwork; the main ribs—the warp—are arranged in numerous closely set pairs which radiated from and must have crossed what was the centre of the bottom, outwards to the gunwale periphery. On this many-rayed star the weft is woven in tightly packed concentric rings as in a wicker basket. It is notable that the paired warp units are made from slender withies of twig thickness (about $\frac{1}{4}$ in. in diameter) similar to those forming the weft. The latter have been split before use, and generally those of the warp are also in the split condition. They appear to be of willow, and still retain the bark.

The gunwale is cylindrical and fascine-like, made up of lengths of round sticks, from $\frac{1}{2}$ to 1 in. diameter, arranged in bundles of three. At every place where the end of one stick is overlapped, a slender withy is twisted round several times and made fast. These ties are spaced from 7 to 9 in. apart, and some are further secured by a few turns of horsehair cord.

The edge of the hide cover is turned in over the gunwale and held in place by a continuous lacing of twisted horsehair cord; this passes in long loops through holes in the edge of the hide to points several inches below the gunwale on the inner side, where the cord of each loop is passed behind one of the pairs of warp withies and then led back to the edge of the cover.

The paddle is short, barely 4 ft. in length. The blade is flat, broad and spade-shaped, 17 in. long by 11 in. in width. The loom $2\frac{1}{2}$ ft. long, is sub-cylindrical and 2 by $1\frac{3}{4}$ in. in cross-section, with a straight cross-crutch at the top.

This coracle was used on the Spey and was presented by Mr Grant, Mains of Advie, Morayshire, who found it under the rafters of his farm buildings.

According to an old newspaper cutting kindly supplied by Mr W. E. Watson, Hon. Secretary, Elgin and Morayshire

Literary Association, a story runs that on one occasion when in London, a former Laird of Grant, an ancestor of the Earls of Seaforth, was annoyed by a disparaging remark made by an English friend about Scottish watermen; thereupon he challenged the Englishman to a race on the Thames by their respective nominees; a heavy wager was laid on the result. When the day of the race arrived, the Scottish champion, who had come post haste from the Spey, launched a tiny coracle on the river, amid the jeers and laughter of the crowds that lined the banks. The ribald comments quickly ceased, for the Scot shot ahead of the Thames waterman and reached London Bridge well ahead of his rival. A bonnetful of golden crowns rewarded the victor, who, it is said, declared that he had no earthly use for them and gallantly presented them to his chief "for the purpose of buying pins for Lady Grant".

The same account further states that in 1730 the Laird of Grant sold the woods of Abernethy to a Yorkshire Company (the York Buildings Co.) for £7000. The Company began operations on an extensive scale but found great difficulty in rafting the timber without guidance down the turbulent waters of the Spey. To remedy this the following device was tried and found successful. A coracle, connected to a number of logs by a horsehair tow-rope, went ahead to keep the raft straight, assisted by men walking along the opposite banks with ropes attached to the after-end of the raft to check undue velocity and help to steer it.

No other account makes reference to men following along the banks and I doubt its accuracy. According to P. Abernethy[1] the fore end of the tow-rope made a running knot or loop round the paddler's knees, "so that if the raft stopt on a stone or any other way, he loosed the knot and let his currach go on, otherwise it would sink in a strong stream; and, after coming in behind the raft again and loosing it, he proceeded again". Such a coracle was of the shape and about the size of "a small brewing kettle".

Another localised reference to Scottish coracles is contained

1 *Moray, Statist. Acc.*, XIII, 134, as quoted by Dr John Jamieson in *An Etymological Dictionary of the Scottish Language*, New edn., Paisley, 1879.

in a letter written in 1798 by Dr John Bethune, Minister of the parish of Dornoch in Sutherlandshire, quoted by the Rev. J. M. Joass.[1] Explaining the derivation of the name Poullchourich, a sea-inlet near Skibo, he says:

> The first division is a *Pool*. The other is from *Courich*, a Vehicle formerly used in the Highlands to serve the purpose of a *Ferry-boat*; only, however, on *Rivers* and small *Creeks*. It was constructed of a round form and of a sort of Wickerwork, for the greater Buoyancy, and covered outwardly with green Hides. Two or three passengers, according to its Size, entered into it, and paddled forward as they cou'd. The whole Bay goes now by this name, but properly and originally it belonged to a particular part, where the water is still and deep, and the passage narrow, between the North side of the *ferry-point* and the opposite shore of *Pulrossie*. In the West Highlands of Ross-shire, where I was born, the *Courich* was very commonly used, and I have known some People who had seen it, tho' it had been disused before my Time. In my Day it had given place to a sort of *Canoe* called *Ammir*, *i.e.*, *Trough*. This was nothing more than the hollowed Trunk of a great Tree; and even this, I believe, is now laid aside.

This reference extends the recorded range of the Scottish coracle in the eighteenth century to a west to east band embracing the Outer Hebrides, Skye, and the counties of Ross, Sutherland and Moray. It is noteworthy that Dr Bethune specifically states that its common use was as a ferry-boat on deep, quiet and narrow waters as in the gorges of the Severn at the present day.

Of the recent use of coracles in Scotland the only positive instance that I can find is, curiously enough, connected with Benbecula, the scene of the ClanRanald story. Here, in 1914, when Dr J. Graham Callander, Director of the National Museum of Antiquities of Scotland, wished to reach an islet in the centre of a small loch, the local gamekeeper lent him a coracle of his own construction. This man used it when shooting wild fowl. Dr Callander, to whom I am obliged for these facts, states in a letter that the coracle was made of a right-angled latticework of laths, slightly oblong, and covered with tarred canvas.

CONCLUSION

The limitations of space forbid detailed consideration of the origin of the British coracle and of the interrelationship of the various types, subtypes and varieties. All that may be done now

[1] *Proc. Soc. Antiquaries of Scotland*, N.S., III, 179, 1880–81.

is to point out that these coracles fall naturally into two distinct divisions:

A. A generalised group characterised by round or oval form, and

B. A specialised group adapted primarily for the netting of river fishes.

Group A includes the Scots coracle from the River Spey and those used on the middle region of the River Severn from Ironbridge southwards. The Spey example is of such exceedingly primitive construction that we may consider it as very close to, if not identical with the form from which all other British coracles have been evolved and developed. In the fully woven basketry of its framework it differs not only from all the coracles of Wales and England, but also from the Irish type exemplified in the well-known Boyne coracle. In every one of these others the framework is formed of a wide, rectangular meshwork of stout "frames", typically of laths, exceptionally of hazel rods; wickerwork is confined at most to a strip a few inches in depth at the gunwale (South Wales, Monmouth and Boyne), with a semicircular plait round the after margin of the bottom in Teifi coracles.

The Spey coracle in the technique of its frame construction is closely related to the *guffa* of Iraq and may be taken as representing the original form of this type of craft.

In the Ironbridge type the primitive rounded shape is retained but an open lath framework replaces basketry. Even so, the lath framework remains of a generalised pattern as compared with that of Welsh coracles.

In Group B specialisation has resulted in a form deep and blunt at the fore-end, its most extreme variety aptly described by the Welsh poet Lewis Glyn Cothi as "short and bull-necked". Out of this type has grown in turn the modern angling coracle of the River Dee, capable of accommodating two persons and possessed of much greater stability than any of the old types due to its greater beam and wide bilges, which give increased displacement.

A characteristic constructional feature of all existing British coracles is that they are built right side up, in marked contrast

to the Boyne coracle and the sea-going Irish curraghs which are all built in an inverted postion—bottom upwards. This is such a fundamental difference that it casts doubt upon the generally accepted belief that the Boyne coracle had a common origin with those of Britain or was developed from them. Rather does it suggest that the Boyne coracle is a simplified form of the sea-going *curach*, which, in turn, may owe its model to an ancient type of plank-built boat. We must, however, not overlook the possibility that it may have arisen as a thought-out mutation, born of the ingenuity of some old Irish coracle builder who may have modified his method of construction through acquaintance with the practice of the builders of sea-going curraghs.

PART I. CORRIGENDA.

In closing this account of the coracles of Britain, I take the opportunity to correct or emend several errors and statements which occur in Part I. Taken seriatim they are the following:

Page 13. The use of the skins of black cattle to cover coracles had probably no origin in superstition; black, I am told, was the most usual colour of the Welsh native breed of cattle in the Middle Ages.

Page 13. In 14th line from top, read *Och* for *O'ch*.

Page 16. The earliest form of the adage quoted is *Llwyth dyn ei gorwg*, given in Dr John Davies' *Dictionary*, 1632.

Page 20. For *Asen saithu*, read *Asen saethu*.

Page 20. The definition of *Astell orlais* should read "The plank below the seat at right angles to it, forming a receptacle for the catch".

Page 21. For *Plwm yn bach cenol* read *Plwmyn bach cenol*.

Page 22. *Corwg* and *Corwgl*. On further consideration I am satisfied that there was no such differentiation as suggested in lines 10 to 13 inclusive. Dr Ifor Williams has very kindly advised me that while I am correct in saying that *corwgl* is a derivative from *corwg*, the position will be clarified if we state "that *cwrwg*, *corwg*: *cwrwgl*, *corwgl* are literary forms in Modern Welsh, but that the boatmen use *cwrwg* or *corwg*" according to the dialect spoken.

The final *l* in *corwgl* and *cwrwgl* is to be regarded as an accretion or excrescence of literary usage; parallel instances are not uncommon in Welsh literature.

Corwc and *chorwc* appear to be the oldest forms of the term as we may infer from the use by Gildas and Adamnan of the Latinized form *curuca*; *chorwc* appears in the Book of Taliesin written in manuscript *circa* 1250–1300, with the meaning of a bowl or drinking vessel. In the *White Book of Mabinogion* (date of MS. *c.* 1325), the plural appears as *corygeu*—without an *l*.

The forms *corwgl* and *cwrwgl* appear first about the middle of the 16th century (W. Salesbury's *Dictionary*, 1547).

Page 27. In the first line of the couplet, for *ddafod* read *ddafad*.

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